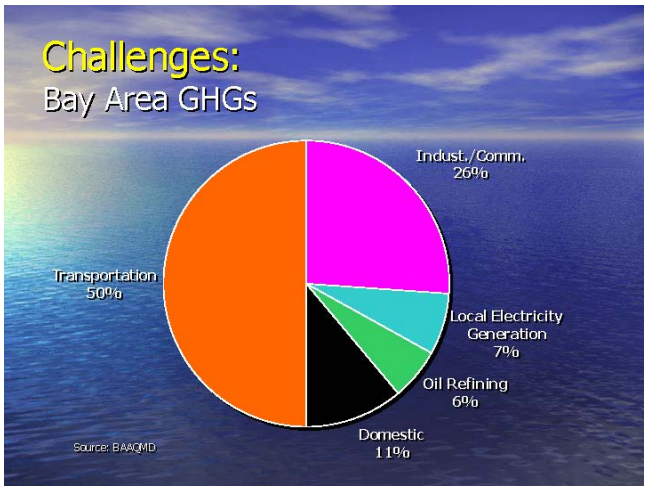
Draft 7/22/08

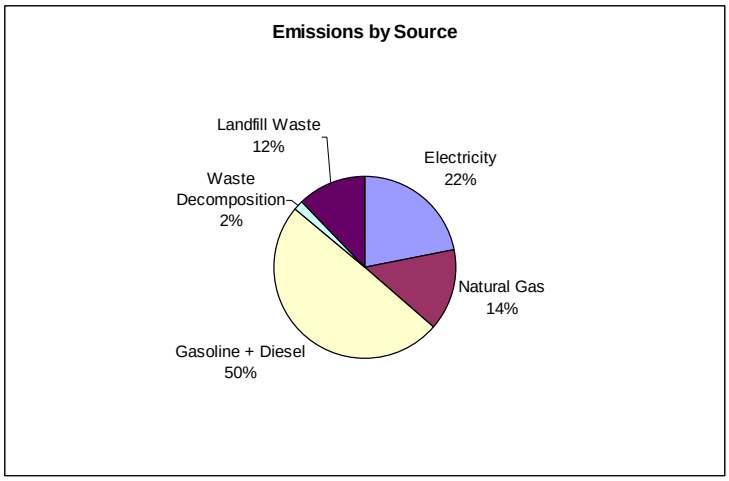
Transit and Transportation Working Group Mountain View Environmental Sustainability Task Force

1. INTRODUCTION

Transportation Challenge

The transportation sector represents approximately 50% of Green House Gas (GHG) emissions. The chart below was prepared by the Joint Policy Committee of the Metropolitan Transportation Commission, ABAG, and the Bay Area Conservation Development Commission. The Baseline Working Group, based on the ICLEI model, found that gasoline and diesel emissions represent 50% of the green house gas emissions and are shown at the right below.





In order to achieve State of California objectives[1] of reducing CO_2 emissions by 80 percent below 1990 levels by 2050, approximately one-half of the reductions will need to come from the transportation sector. This point cannot be stressed enough. **If the City of Mountain is going to achieve CO_2 emissions targets, reduction in petroleum use by the transportation sector must be aggressively addressed head on.** If our world, our nation, and our community are to achieve substantial reductions in CO_2, there must be a fundamental shift in our thinking, our ways of doing business, our personal

[1] *California Global Warming Solutions Act of 2006 and Governor's Executive Order S-20-06*

investments in mobility vehicles, our public investment in alternatives to petroleum use, our land use decisions and ultimately our personal choices on the modes of transportation we decide to utilize for the trips we make.

There are five primary strategies or technologies for reducing petroleum use for transportation. First, we need to focus on **alternatives to normal driving** such as walking, biking, carpooling, car sharing, trains and buses. Second, **better land use planning** can make these options more viable for more people. To this end, the Transit and Transportation Working Group had three joint working sessions with the Land Use Working Group. Third, we need to transition to **more fuel efficient and smaller cars, cars powered by biofuels, hybrid cars, and neighborhood electric vehicles** because these fuels and vehicles are available today. Fourth, we need to **price transportation** in order to not subsidize our current usage patterns of petroleum. Finally **next generation vehicles such as electric cars, plug-in hybrid cars, and hydrogen cars** will help us transition away from petroleum in the mid- to long-term, using electricity instead of petroleum as the preferred propulsion means.

The Metropolitan Transportation Commission conducted technical analyses utilizing a modal-based approach and pricing and land use sensitivity analyses to determine how various broad packages of strategies would enable the region to achieve GHG emission objectives.[2] There is a need for an aggressive implementation combining transportation behavior, pricing, land use, and fuel efficiency advances if we are to achieve the target C02 reductions.

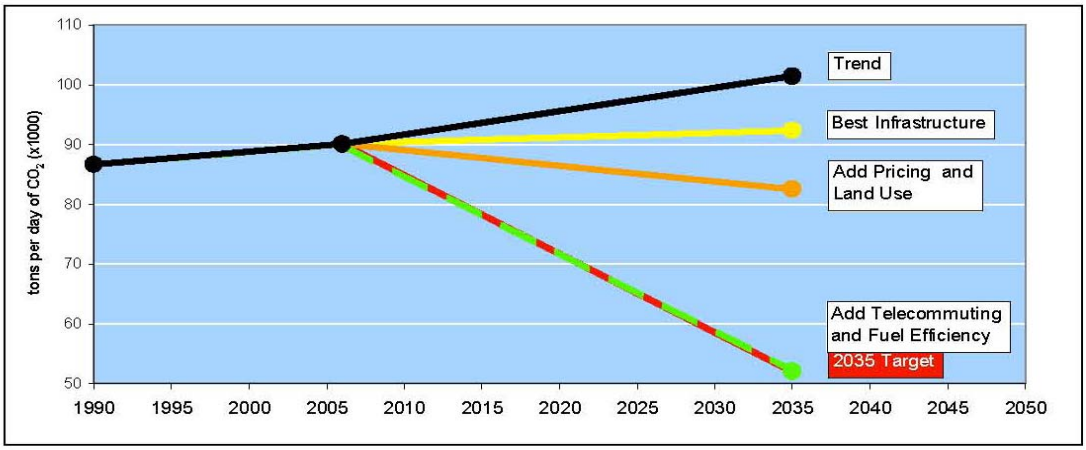
[2] Metropolitan Transportation Commission, *2035 Change in Motion Travel Forecasts for the San Francisco Bay Area 2009 Regional Transportation Plan Vision 2035 Analysis Data Summary.* November 2007

Emissions Measure: Carbon Dioxide (CO_2)

Target: Reduce CO_2 emissions by 40% below 1990 levels

(Includes CO_2 from non-recurrent congestion)

Year	Tons per day of CO_2 (x1000)
1990	87
2006	90
2035 Target	52



Obviously, achievement of CO_2 objectives for the transportation sector will require strong leadership at the national and state level. Fuel efficiency standards and the research, development and deployment of alternative fuels and vehicles are national and state policy issues. The fact is that the transportation sector initiatives that will have the most environmental impact in CO_2 reductions are the purview of Federal and State of California policy and regulation implementation. The June 2008 Scoping Plan[3] for implementation of AB 32 in California lists the expected reductions in million metric tons of CO2 equivalents ($MMTCO_2E$) from statewide policies and regulations.

Transportation Sector** **California Recommended Reduction Strategies**	**2020 Reductions MMTCO2E***
California Light-Duty Vehicle GHG Standards	
· Implement Pavley standards	31.7
· Develop Pavley II light-duty vehicle standards	
Low Carbon Fuel Standard	16.5
Vehicle Efficiency Measures	4.8
Heavy/Medium Duty Vehicles	2.5
· Heavy-Duty Vehicle GHG Emission Reduction	
· Medium- and Heavy-Duty Vehicle Hybridization	
· Heavy-Duty Engine Efficiency	
High Speed Rail	1

* Million Metric Tons CO2 Equivalent

** See Appendix B for descriptions of strategies

[3] California Air Resources Board *Climate Change Draft Scoping Plan,* June 2008.

State and Federal initiatives need to provide leadership in improving auto fuel efficiency and low carbon fuels. The Transit and Transportation Working Group has focused its efforts on what the City of Mountain View can contribute to reducing greenhouse gas emissions and improving overall sustainability goals at the local level. Our focus, in concert with the Land Use Working Group, is to continue to build a community with a network of Village Centers and Grand Boulevards that enable an increased modal share of walking, bicycling, transit and significantly more utilization of zero or very low emission electric vehicles. These efforts will reduce vehicle miles traveled by internal combustion engines.

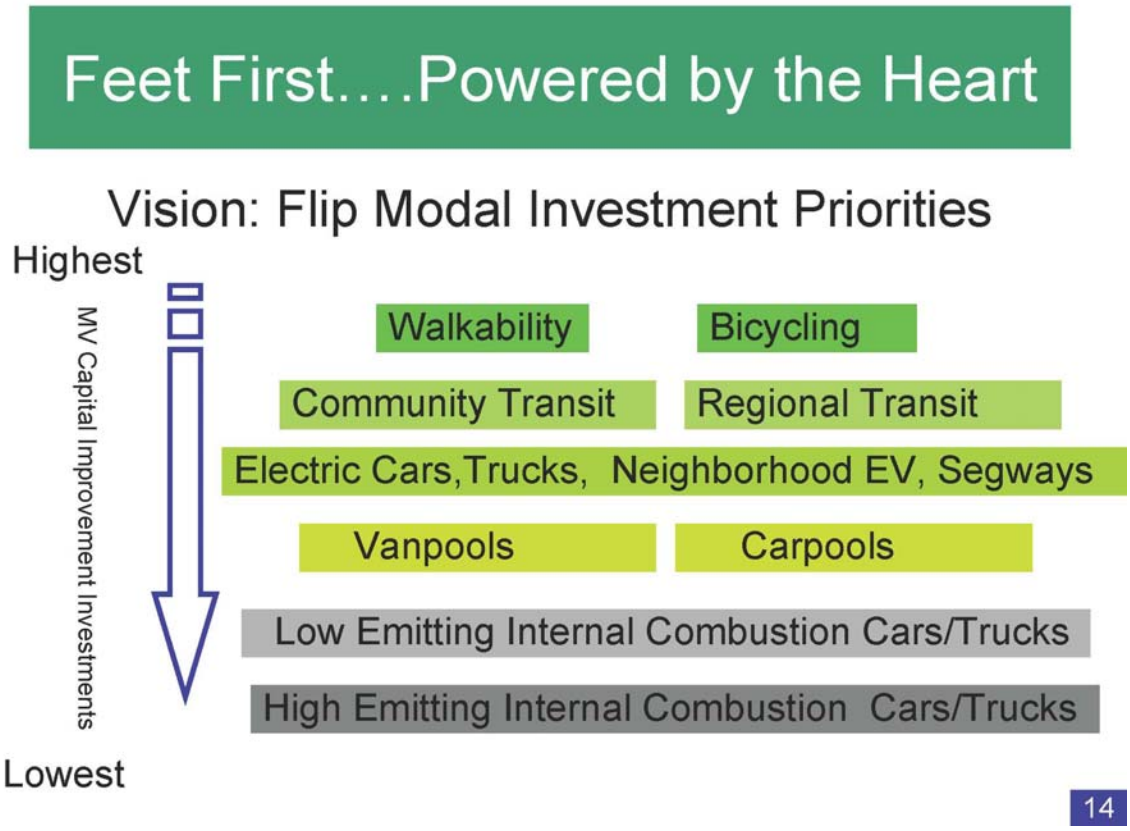
Mountain View Has a Strong Foundation to Work From

The City of Mountain View has a strong legacy of effective transportation and land use planning. Compared to many communities, Mountain View has a very strong foundation to work from as the City considers new ways to address climate change concerns, and especially transportation sector contributions. Examples of these efforts include (partial list only):

- Mountain View Transportation Center: Caltrain, VTA light rail and buses, shuttles
- VTA Lines 22 and 522 on El Camino
- Urban design: Castro Street
- Transit oriented development: The Crossings, Whisman Station, Avalon Towers, 399 W. El Camino
- Stevens Creek Bicycle and Pedestrian Trail
- Google: the nation's most extensive and well-utilized employee commute program

Recommended Goal

The City of Mountain View should adopt an overall transportation policy goal of "Feet First...Powered by the Heart." This goal provides guidance for how the City of Mountain View should make transportation infrastructure investments to achieve overall mobility goals. This goal is very much aligned with the Land Use Working Group's Village Center and Grand Boulevard recommendations.



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The challenges presented by global climate change necessitate a rethinking of priorities for funding of transportation projects at all levels of government. For the City of Mountain View, we are recommending a paradigm shift in City Council policies, investment priorities, and City staff allocation relevant to mobility. Walking and bicycling infrastructure improvements should receive top priority in the transportation portion of the City budget. The second tier priority should be community and City contributions to regional transit. The third tier should be accommodation of zero emission electric cars, neighborhood vehicles and personal electric vehicles such as Segways. It is recommended that this vision be incorporated into the upcoming revision of the Circulation Element of the General Plan.

Recommended Guiding Principles

The above goal provides a vision for setting priorities the for City Council decision-making in adoption of the Circulation element of the General Plan land use deliberations, the capital improvement program, and staff allocation.

- More land use decisions that enable a significant shift to walking, biking, and neighborhood electric vehicle (NEV) driving opportunities. Bicycling and pedestrian infrastructure improvements will provide many modal shifts to bicycling and walking if there is continuation of land use decisions by the City

Council that enable a greater degree of choice in being able to walk or bicycle for residents and employees daily activities.
- A reasonable alternative transportation choice for 75% of local trips
- Extensive use of emerging technologies for real time transit information, dynamic ride-sharing, and smart paratransit

Recommended Objectives

The average vehicle miles traveled per capita in the San Francisco Bay Area was 19.0 in 2006.[4] An overall objective of the Transit and Transportation Working Group strategy recommendations is to reduce the vehicle miles traveled by 10% by 2030 to an average of 17.1 vehicle miles traveled per capita by internal combustion engines.

Overview of Recommended Strategies

The following are 13 priority strategies that we are recommending that the City of Mountain fully implement. They are organized by short-term (under one year), mid-term (1 to 3 years) and long-term (3 or more years). Detailed two-page descriptions follow in the next section.

The Transit and Transportation Working Group has considered each of its priority recommendations in terms of how they might contribute to our recommended vision of "Feet First...Powered by the Heart" and our overall objective of a reduction of 10% vehicles miles traveled by internal combustion engines. The chair of the Transit and Transportation Group has encouraged working group members to consider transportation and land use as an integrated system. Our short-term and mid-term priorities are building blocks for making a paradigm shift in mobility choices.

Our priorities are part of a systems approach in rethinking a long-term vision of land use and transportation. They are not isolated individual recommendations. There is well-documented correlation between the land use decisions the City of Mountain View makes and the mobility choices and corresponding transportation impacts that residents and employees make. The Transit and Transportation priority recommendations support the priority recommendations of the Land Use Working Group.

Therefore, we also feel that the fiscal impacts and environmental impacts cannot be adequately considered on a recommendation by recommendation basis. The Metropolitan Transportation Commission has recently implemented an activity based transportation model. This model process is much more capable of capturing the real impacts of the Village Center and Grand Boulevard concepts that provide the means to making our "Feet First...Powered by the Heart" vision work. The Transit and Transportation Working Group strongly recommends the General Plan consulting firm

[4] Metropolitan Transportation Commission, *2035 Change in Motion Travel Forecasts, op. cit.*

utilize this activity based model to compare the environmental effects of the Transit and Transportation and Land Use Working recommendations to business as usual.

Short-Term Priorities: Implement within One Year

These short-term implementation strategies are steps that the City Council can immediately take to build upon Mountain View's legacy of being an action-oriented city. While most of these actions will not have a major impact on CO_2 emissions, they will provide visible and low cost programs that increase the availability of choices of low or zero carbon emission transportation modes.

Short-Term Priorities	Impact	Difficulty	Cost
1. Join Plug-In Partners Program	Medium	Easy	Low
2. Significantly increase bike parking	Low	Easy	Low
3. MV Car Share	Low	Easy	Low
4. Automated Bike Rental System	Low	Med.	Med

**Categories of impact, difficulty, and cost are based on the collective judgment and votes of Transit and Transportation Working Group members.*

1. Join Plug-In Partners Program: Mountain View should participate in the Plug-In Partners Program. Participants agree to consider purchasing Plug-In Vehicles when they are available. The Program presents auto makers with an aggregate "soft" order from participants to encourage the manufacture of Plug-In vehicles.

2. Significantly Increase Bike Parking: Mountain should significantly increase bicycle parking in public areas. This recommendation was repeatedly brought up by the public in email and public forums. Parking a bike should be readily available at the destination. The common practice now is find a tree or light post to lock one's bike. In downtown, the recommendation is consistent with Land Use Working Group recommendation of eliminating on-street parking on Castro St. and using some of the parking for more on-street bicycle parking.

3. MV Car Share: The city of Mountain View owns a fleet of fuel-efficient hybrid vehicles that are not normally driven on evenings and weekends. We recommend that the City implement a Car Share program using these vehicles, in partnership with an organization that actually handles the rentals. Mountain View residents would be able to book a car and do pickup/return at a convenient Downtown Mountain View location.

4. Automated Bicycle Parking Set up racks of bikes for rent at the train stations as well as in neighborhood depots near housing clusters (e.g., at the approximately 15 well-distributed village centers proposed by the Land Use Group). The bikes would be sturdy single gear machines (with baskets), painted a distinctive color, with logo and instructions on the frame regarding rental and return. Rental charges should be low.

Mid-Term Priorities: Implement within 3 Years

The Transit and Transportation Working Group recommends that the City of Mountain View begin the process implementing these mid-term recommendations immediately. In most cases, there is a need for a specific plan of action and additional study before implementation can occur.

Mid-Term Priorities (1-3 years)	Impact	Difficulty	Cost
1. Adopt and begin implementation of a Pedestrian Master Plan	High	Med.	Med.
2. Getting Children to School without cars	High	Med.	Med.
3. Establish Green Parking Code	High	High	Low
4. Increase bus usage in MV	Med.	Med.	Med.
5. Implement community shuttles	Med.	Med.	High

1. Improve walkability infrastructure: Implement a Pedestrian Master Plan to prioritize City of Mountain View infrastructure investments that encourage walking. The Pedestrian Plan should address existing walkability issues and provide a investment framework for pedestrian connectivity with the Village Center and Grand Boulevard recommendations of the Land Use Working Group.

2. Getting Children to School without Cars: An 8 point recommendation includes purchasing low-emission school buses, increasing bicycle paths and parking, improving school bus service, consideration of a community shuttle program, fully implementing Safe Routes to Schools, adopting a similar program to the Gunn High School GO-FAST program, and a "schoolpooling" incentive program

3. Establish Green Parking Code: A 12 point recommendation is offered including a citywide parking study should be undertaken to determine the required supply of parking based on the 10% reduction objective in vehicle miles traveled (VMT). The Green Parking Code should adopt maximum parking requirements by land use to reflect 10% VMT reduction goal; consider the needs of neighborhood electric cars, and prioritized parking; consider parking site plan that encourage easy walking access and connectivity;

shared parking incentives and encourage standards for landscaping, and tree plantings, among others.

4. Increase bus usage in MV: A 11-point recommendation is offered including full implementation of the Translink: provide real-time arrival and departure signage at major bus stops; designate a bus lane on major thoroughfares such as El Camino; design more attractive, covered, well-maintained and well-lit bus stops; lower the cost for "regular" customers, i.e., not seniors, juniors or the disabled; hire a public relations firm, paid for jointly by the City and VTA, specifically to do a marketing campaign to reduce the stigma of riding buses; partner with the VTA in subsidizing residential eco-passes for multi-unit housing, among others.

5. Implement Community Shuttles: We recommend that Mountain View institute a comprehensive system of frequent electric or hybrid shuttles, designed to serve the needs of many sectors of the community, including connections to Caltrain, light rail, and other transport services that go beyond Mountain View; trips that serve students attending elementary, junior and high school in Mountain View; Connections for travel around town, including access to shopping, library, medical services, senior center, daycare center and pools without using a personal vehicle; Connections to downtown for restaurant patrons (for lunch and dinner; evening and weekend shuttles to entertainment centers, including Shoreline Amphitheater, Century theaters and the Downtown Performing Arts Center. Also to Shoreline Park, and to the Farmer's Market on Sundays.

Long-Term Priorities: Implementation Longer Than Three Years

These long-term priorities will be needed as part of a multi-sector plan to reduce the City's contribution of CO_2 emissions by 80% below 1990 levels.

Long-Term Priority: 3+ years	Impact	Difficulty	Cost
1. Network of 4 Grand Boulevards (includes bike/ped. buffer)	Very High	High	Very High
2. Regional paid parking program	High	High	Low
3. Electrify Caltrain	High	Med.	High
4. Fully implement bicycle boulevards	Med.	Med.	Med.

1. Network of 4 Grand Boulevards: This is a joint recommendation with the Land Use Working Group. It is recommended that the Grand Boulevard network be fully fleshed out as part of the General Plan Circulation element. The Transportation Working Group has the following initial input: Two east/west Grand Boulevards: El Camino Real and Middlefield Roads. We also recommend two north/south Grand Boulevards: From El

Camino to Mountain View Transportation Center to Shoreline to East Charleston[5]. A second north/south Grand Boulevard might be considered to Moffett Field, depending on the long-term land use developments there. The Grand Boulevard would have the following transportation features (see Land Use Working Group recommendations for land use considerations): A high capacity transit service[6] with a minimum of 15 minutes frequency with exclusive right of way optimal; community transit would provide timed transfer connections; second partial lane would be devoted to a bicycle and pedestrian realm as utilized in many European cities with parking as a buffer to auto traffic; and streetscape and walkability standards would be adopted to connect adjoining neighborhoods to the Grand Boulevard.

2. Regional paid parking program: The City of Mountain View City Council should approach neighboring cities to develop a collaborative pricing and parking policy plan as an implementation measure of each individual cities environmental sustainability task force efforts. Each city should appoint three citizens representing neighborhood, business and environmental interests to the task force, supported by a technical advisory committee from each city. This subregional Green Parking Task Force would have one year to make a recommendation and presentation to a combined meeting of the City Councils.

3. Electrify Caltrain: The City Council should continue to strongly support and advocate for the electrification of Caltrain. An electrified Caltrain can provide real travel time reductions and improve the overall system by increasing capacity and allowing increased levels of service. These travel time savings are expected to stimulate additional ridership, reducing vehicle miles of travel and congestion on Peninsula roadways.

4. Fully Recommend Bicycle Boulevards: The City Council should encourage the completion of the study of the current trial bicycle boulevard, complete this boulevard based upon the results, and implement a system of these boulevards using the resulting first boulevard as an example. Similar to the Palo Alto Bryant St. Bicycle Boulevard, priorities should be provided to bicycles by reducing the number of stop signs, providing signal prioritization to bicyclists, and providing auto barriers at key locations to discourage auto usage on the street. This network should help connect the results of the implementation of the village concept. The objective is to reduce considerably the need for using personal motor vehicle transportation within the City.

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[5] The street alignment will depend on several factors including the potential of making a portion of Castro Street a pedestrian mall. If the High Speed Rail becomes a reality, access to the downtown Mountain View Transportation Center with grade crossing improvements would need to be considered.

[6] The Transit and Transportation Working Group has deliberately stayed away from engineering solutions. The high capacity options could include streetcar, light rail, or rapid bus in mixed traffic or in an exclusive lane. These alternatives would be fully evaluated as part of an Alternatives Analysis required for Federal Transit Administration New Start or Small Start funding. We do recommend service level standards in the detailed recommendation.

2. Recommended Priorities

The Transit and Transportation Working Group has decided to put forth recommendations in three categories: short-term (less than one year), mid-term (one to three years) and long-term (greater than three years). The priority was based on consensus voting process at a series of three meetings. Two of the recommendations on Grand Boulevards and Green Parking are jointly proposed with the Land Use Working Group.

Recommended Short-Term Priorities: Implemented Within One Year

Short Term Priority #1

Title: Promote Plug-in Vehicles

Working Group: Transit and Transportation

Statement of Issue

Plug-In Hybrids and Electric Vehicles are able to charge their batteries from any source of electricity to supply some or all of their power. This reduces GHG emissions significantly and reduces fuel costs.

Plug-in hybrids run on battery power for shorter trips and use conventional fuels for unlimited range.

Electric vehicles have a limited range that easily satisfies most daily driving needs. Rapid improvements in battery technology are providing longer range, faster recharge times and greater durability. Lighter materials, better aerodynamics and other technological improvements are quickly increasing the range and the convenience of electric vehicles.

Recommendation

Short term (1-12 mos.): Have Mountain View participate in the Plug-In Partners Program. Participants agree to consider purchasing Plug-In Vehicles when they are available. The Program presents auto makers with an aggregate "soft" order from participants to encourage the manufacture of Plug-In vehicles.

Medium term (1-3 yrs.):

1) Start to transition city fleet to Plug-In Vehicles (vehicles expected to be available in 2010).
2) Participate in pilot Vehicle to Grid projects (where plugged in vehicles get reduced electric rates by providing power to the electric grid during peak use times).
3) Apply for grants from appropriate agencies and organizations to help finance above items.

Long term (3+ yrs.): Develop requirements or incentives that encourage use of Plug-In vehicles citywide. These could include:

1) Have parking for commercial buildings offer vehicle charging stations. Have new residential buildings wired with outlets for charging Plug-In Vehicles.
2) Have dedicated parking for Neighborhood Electric Vehicles, which are small and therefore can have smaller parking spaces.

Environmental Impact

- A Toyota Prius converted to a Plug-In Hybrid has 66% less CO_2e per mile than the average vehicle in the U.S. fleet[7]. When auto makers sell a vehicle designed from the start as a Plug-In Hybrid it will be much more efficient than a converted car, offering even better GHG reductions.
- Ongoing reductions in GHG intensity of our electricity supply will allow Plug-In vehicles to provide improving GHG reductions over time.
- To reduce GHG even further, Plug-In hybrids can be re-fueled with bio-fuels instead of fossil fuels for longer trips. These could include sustainable bio-fuels, made from non-food sources such as crop by-products or other waste products, as technology to produce them becomes available.

Fiscal Impact and Synergies

- Joining the Plug-In Partners Program costs nothing and only requires estimating city's expected vehicle purchases.
- Purchasing Plug-In Hybrids or pure Electric Vehicles: Since they are expected to be available from multiple manufacturers only in 2010, it is too early to reliably estimate cost. For economic analysis see the report titled "How to Use Life Cycle Analysis Comparisons of PHEVs to Competing Powertrains" from the Argonne National Laboratory (www.transportation.anl.gov/pdfs/HV/501.pdf).

[7] See report at www.rechargeIT.org (further documentation at www.google.org/recharge/dashboard/calculator).

Obstacles

Providing charging stations for city fleet vehicles is relatively easy to implement.

Requiring charging stations in shared parking areas such as multifamily housing and commercial parking lots presents obstacles such as:

- Determining who pays for electricity, or finding a way to charge users appropriately.
- Developing standards for safe and effective public charging facility designs.

Partnerships

Plug-In Bay Area and the Silicon Valley Leadership Group are working to familiarize Bay Area cities with this technology and to assist them in joining the Plug-In Partners' national campaign (see www.pluginbayarea.org).

Short Term Priority #2

Title: Increase Bicycle Parking

Working Group: Transit and Transportation Working Group.

Statement of Issue

Bicycle parking provisions have been sporadic and inconsistent throughout the city making it difficult to fully utilize the bicycle as a transportation option. There is a 'grandfathering' issue with regard to bicycle parking requirements in new versus old developments which cause the lack of or inconsistency in providing this parking and this will need to be resolved.

Recommendation

In order for bicycling to work as a preferred transportation option, bicycle parking must be available and the facilities should meet standards as have been done for automotive parking. The VTA Bicycle Technical Guidelines as well as the City have guidelines and requirements for these facilities which need to be vigorously applied. It is important to have a way that bicycle parking be implemented properly in every situation including the 'grandfathered' case for exemption, improper installations for the lack of competent inspection and signoff, and areas under other governmental control within the City (public schools, county, state, and Federal governments).

What is on City property and in the domain of the Parking District (defined by the Downtown Committee) should be implemented short term.

What is on private property, other government property, and 'grandfathered' should be implemented medium term at the most.

Environmental Impact

The following impacts would be expected:

- Secure, standard, and easily available bicycle parking will increase the use of bicycling at the expense of the use of motor vehicles and thus reduce GHG emissions.
- There will be a reduction in the use of petroleum products from reduced use of vehicle fuels and materials for construction and maintenance.

Fiscal Impact

Reduced costs for automotive parking as increased use of the bicycle would only require less expensive bicycle parking facilities; costs per bicycle parking is substantially less than for the automobile. There may need to be some compensation to correct incorrect signoffs and for proper installations in 'grandfathered' areas.

Obstacles

The following obstacles may be encountered:

- Working out the 'grandfathered' cases.
- Working out the cases with public schools, Moffett Field, and other governmental jurisdictions within the City.

Partnerships

Involvement with the Downtown Committee as well as input from the MV BPAC and developers of one of the village concepts should be made.

Short Term Priority #3

Title: Mountain View Car Share

Working Group: Transit/Transportation

Statement of Issue

The city of Mountain View owns a fleet of fuel-efficient hybrid vehicles that are not normally driven on evenings and weekends. It should be possible to make much more productive use of this City-owned resource.

Recommendation

We recommend that the City implement a Car Share program using these vehicles, in partnership with an organization that actually handles the rentals. Mountain View residents would be able to book a car and do pickup/return at a convenient Downtown Mountain View location. This could be a short term (several months) and on-going solution.

Environmental Impact

- Vehicle-miles traveled in efficient cars would replace vehicle-miles driven in less-efficient vehicles.
- Some local residents might choose not to own a car at all, or to have one rather than two cars, reducing parking requirements and number of cars on the road.

Fiscal Impact

- This program could be profitable for the City, even after paying a partner to do everything associated with the rentals. The City of Berkeley, for example, has saved $500,000 through such a program[8].
- For residents choosing to make use of the program there could be considerable savings because of not incurring the substantial annual costs of owning and operating a vehicle. The City Car Share handbook shows data indicating that using CarShare is more economical than owning one's own car if that car is driven less than 5000 miles per year[9]. Thus this program would save both dollars and GHG emissions.

Obstacles

- For car-sharers, more planning of car-based excursions would be needed than if they drove their own car.
- The additional need for repair of vehicles, and possible non-return of a shared car before City business hours could interfere with necessary City business, but only if the car sharing business was not properly run.

Partnerships

A carshare rental company, such as City CarShare. For business account inquiries to City Car Share, contact Anita Daley, Director of Membership Development and Outreach, at (415) 995-8588. There are also other car share vendors that may want to bid on such a program.

[8] http://www.smdailyjournal.com/article_preview_print.php?id=90751
[9] http://www.citycarshare.org/download/CCS_BCCtYC_Long.pdf, see Figure 7

Short Term Priority #4

Title: Automated Bicycle Rental

Working Group: Transit and Transportation

Statement of Issue

Many people could ride a bike instead of traveling by car to and from public transit or to get around town. But they may not possess a bicycle or are concerned about finding a good place to park it.

Recommendation

Set up racks of bikes for rent at the train stations as well as in neighborhood depots near housing clusters (e.g., at the approximately 15 well-distributed village centers proposed by the Land Use Group). The bikes would be sturdy single gear machines (with baskets), painted a distinctive color, with logo and instructions on the frame regarding rental and return. Rental charges should be low.

In working out the details of the operation Mountain View could learn from the experience of other cities in the US and in Europe[10]. One possibility is that there be a yearly membership fee plus rental credits, prepaid by credit card, with rental rates of say $0 for the first half hour, $1 for the second half-hour, $2 for the third half-hour, and $4 for the fourth half-hour of use and every 30 minutes after that. Cyclists should also be able to rent a bicycle on the spot, or make a reservation in advance using a credit card.

An alternative (or additional) set-up would have the automated bicycle rental stations at a substantial number of Caltrain stations in Mountain View and in neighboring cities. The

[10] http://www.washingtonpost.com/wp-dyn/content/article/2007/03/23/AR2007032301753.html

rental fee structure could be set to be attractive for dropping off a bike at one Caltrain station before taking the train to another station and renting another bike to get to the workplace and back to the train station- this would reduce the demand for places for bikes on the train itself.

This is a medium term (1-3 yrs) and ongoing solution.

Environmental Impact

- Reduction in vehicle miles traveled by cars to public transport and on errands (lower GHGs)
- Reduced need for car parking at the train stations (and more efficient use of existing parking space)
- Improved air quality, reduced travel times, improved health of MV residents because of exercise.

Fiscal Impact

- Set-up costs could be substantial, including the need for expertise in choice of a suitable type of bicycle and the operation set-up. If the multi-city version were adopted the costs would be shared across participating cities and, most likely, with Caltrain. These costs could possibly be reduced through collaborations with bicycle manufacturers and repair shops, who might reasonably anticipate a subsequent increase in private bicycle use and sales.
- The implementation of this, as well as other proposals that would further reduce the need for car parking at the Mountain View Caltrain Station, would free up the $17-$20 million that, it has been said, would be required to build a new parking building near the station.

Obstacles

- Instead of leaving the house carrying just car keys, residents would need to carry a bicycle helmet instead.
- If it should prove impossible to find an appropriate vendor to set up the operation in the short –term, it may be feasible to establish a Bicycle Library type of operation as has been successfully achieved by Bill Wright Burton and others in Arcata, California[11] This latter type of operation may be volunteer intensive, and would, in time, be superceded by a more commercial operation.

- Not all MV streets are well-designed for safe bicycle use, but the implementation of other bicycling related proposals coming from this group will gradually rectify that situation.

[11] www.Librarybikes.org

Partnerships

A bicycle rental vendor, local companies with an interest in bicycle commuting, e.g., Google, a Bicycle manufacturer, Bicycle repair shop(s), local bicycle enthusiasts (a possible volunteer pool).

Bill Wright Burton would be a valuable advisor for such a project and collaboration with neighboring cities including Palo Alto is a distinct possibility. Caltrain should also be interested in the idea.

Recommended Mid-Term Priorities: Implemented Within Three Years

Mid Term Priority #1

Title: Adopt and Implement a Pedestrian Master Plan

Working Group: Transit and Transportation

Statement of Issue

The City of Mountain View needs to provide a comprehensive plan to improve walkability throughout the City. Attractive pedestrian spaces are essential ingredients of healthy communities, both for support of multimodal travel and for providing great public spaces.[12] While there are very good examples of good pedestrian access in Mountain View along Castro Street, Whisman Station, Stevens Creek Trail, to name just a few, there are significant opportunities for continuing to improve community infrastructure to improve the pedestrian environment.

The Village Centers and Grand Boulevard recommendations of Land Use Working Group have a focus of providing a pedestrian realm that give pedestrians more safe, comfortable, and interesting walking spaces in their own neighborhoods.

The City Public Works Department, along with the Bicycling and Pedestrian Advisory Committee (BPAC), has developed a Mountain View Bicycle Transportation Plan[13] to guide bicycle investments, no equivalent plan exists to cover pedestrian issues.

Recommendation

The task force recommends that the Public Works Department and the BPAC create a stand-alone Mountain View Pedestrian Master Plan to develop a pedestrian network in Mountain View such that all Mountain View residents feel that walking or bicycling is a reasonable choice for a majority of the trips they make during an average day. The Mountain View Pedestrian Plan should provide a blueprint for prioritizing and implementing necessary infrastructure to encourage more pedestrian trips.

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[12] Santa Clara Valley Transportation Authority, *Pedestrian Techincal Guidelinesm* October 2003.
[13] http://www.ci.mtnview.ca.us/services/learn_about_our_city/bicycling_in_mountain_view.asp
[22] Recommendations 1-6 are taken from *"Greening" Mountain View Elementary Schools: An Analysis of Options for the Mountain View Whisman School District to Reduce Greenhouse Gas Emissions and Preserve Natural Resources* (Transportation Section, pp.12-21). By O.Puerta, R. Rubio, J. Wooley, C. Sepe & T. Whinery. Stanford University: March 9, 2008.

The Transit and Transportation Working Group recognizes that the ability to walk or bicycle is very dependent on the recommendations of the Land Use Working Group. Specifically, the network of Village Centers and Grand Boulevards will make it more significantly more feasible to walk or bicycle for more residents than it is today.

The Santa Clara Valley Transportation Authority has developed an excellent set of *Pedestrian Technical Guidelines* that are specifically designed to provide guidance to cities like Mountain View in developing and implementing a Pedestrian Master Plan. The following are the recommended elements that should be included in the Pedestrian Master Plan:

Travelway Elements: narrower streets and travel lanes, striped on-street parking and building on the existing Mountain View traffic calming program.

Intersection Elements: high-visibility striping or alternative paving treatments for pedestrians, pedestrian refuge median islands, pedestrian friendly signal-timing, modern roundabouts at strategic locations, among others.

Sidewalk Elements: sidewalks with appropriate widths, grades and surfaces; street trees and planting strips or tree wells to buffer pedestrian from traffic, pedestrian scale lighting, pedestrian-oriented signage, among others.

Connectivity Elements: Interconnected streets to disperse traffic loads; alleys and shared streets to increase connectivity; pedestrian connective where roadway connections are feasible such as mid-block accessways, cul-de-sac connectors, stairways, and bridges, among others.

Parking Elements: minimum amount supplied, accounting for shared on-street parking; Surface lots to the rear of buildings; parking structures wrapped with mixed use development; landscaping to reduce impervious surface and tress to shade pedestrians; number and width of driveways minimized; access shared with parking lots, among others.

Transit Access Elements: Stops located in high-activity areas; adequate width of pedestrian realm adjacent to transit facilities; enhanced crossings at intersections in proximity to station; direct access to station from adjacent development, among others.

Urban Public Space Elements: Small urban spaces provided, spaces visible, accessible from surrounding neighborhood; seating provided, with flexible configurations.

These elements would each be developed for Mountain View neighborhoods. The Pedestrian Master Plan would develop a prioritized capital improvement programs with phased in implementation. Pedestrian and bicycle capital improvements would receive top priority if the Transit and Transportation Working Groups "Feet First...Powered by the Hear" goal is adopted by the City Council.

Environmental Impact

Net environmental impact is uncertain, as this is dependent on the number and scope of corrections and implementations that the City chooses or includes in the General Plan and in other planning documents. However, pedestrian- and bicycle-friendly design encourages individuals to use their gas-powered vehicles less, and any reduction in miles traveled by car results in an equivalent reduction in greenhouse gas emissions. Nonetheless, the task force believes that the following are true if any significant implementations of the recommendations in this section are realized:

- As transportation accounts for 50% of the GHG emissions in the Bay Area, even a small reduction of 25% of motor vehicle use will produce a net reduction of 10% of these emissions.
- Will improve safety for pedestrians and bikers.
- Will reduce traffic congestion, noise pollution, and air pollution

Fiscal Impact and Synergies

Uncertain, as this is dependent on the number and scope of corrections and implementations that the City chooses or includes in the General Plan and in other planning documents. Further, cost is affected by the mix of signals, signage, crosswalk paint and materials, and public outreach the City chooses to exercise in each case and in general for each action item.

Obstacles

The only possible obstacles identified at this time related to funding and labor sourcing. Most corrections and implementations called for in this document require cash outlay and/or budgeting, and the City must, necessarily weight the relative merits of one fiscal need over another with regard to city expenses.

Partnerships

In some cases, funding can be mitigated to some extent by considering, for example:

- For crosswalk brickwork, promote individuals or organizations names imprinting as a cost offset.
- Leadership Mountain View Walkability Group (http://groups.google.com/group/mvwalkability and http://groups.google.com/group/lmv-walkability-group-project)
- City of Mountain View Bicycling and Pedestrian Advisory Committee (http://www.ci.mtnview.ca.us/city_council/bcc/bicycle_pedestrian.asp)
- Silicon Valley Bicycle Coalition (http://svbcbikes.org)
- Valley Transportation Authority, Development and Congestion Management Division (http://www.vta.org)

Mid Term Priority #2

Title: Alternative Transportation for School Children

Working Group: Transportation and Transit

Statement of Issue

One of the major ways Mountain View schools contribute emissions of GHGs to the environment is through the transportation of children to and from school. These emissions exist for two reasons: out-of-date school buses and children being driven to school in cars. Not only does this harm the environment it also creates a public health risk because exhaust emissions, especially particulates from buses, have a particularly harmful effect on children. Also, when children come to school in cars rather than walking or biking, it sets a bad example for them, their families and the community at large.

Recommendations:

(1) Apply for a Lower-Emission School Bus Grant to retrofit old buses or buy new Compressed Natural Gas buses.
(2) Put in extra bike racks and bike paths to encourage children to bike to school.
(3) Encourage greater use of the district's school bus program by modifying bus routes to encompass neighborhoods currently not included.
(4) Fully implement the four grants Mountain View has received from the "California Safe Routes to School Program" to: install speed monitoring equipment, provide education and institute a community-based alternative transportation program.
(5) Adopt "parent-supervised buses" in which groups of children, with accompanying adults, bike together to and from school.
(6) For high schools, consider adopting the successful Gunn GO-FAST program which reduced the number of cars driven to school by: (a) creating a program tailored to the students of that school, (b) raising the cost for parking passes, (c) providing parking passes and priority parking for carpools, (d) giving random small awards to students who biked regularly and, (e) giving large prizes, such as new bikes, to students who consistently biked the most to school.[22]
(7) Consider helping to subsidize free community buses that would take children to and from school and could be utilized to transport other people during off hours.
(8) Consider adopting San Mateo County's Transportation Demand Agency program of "schoolpooling" which provides gas cards worth $25 to parents who transport at least 2 children from 2 different households to one school a minimum of 2 days a week for eight weeks.[23]

Timeline: Medium and Long-Term

[23] www.commute.org

Environmental Impact

- Decreased number of diesel pollutants released into the air from old buses[24]
- Decreased amount of carbon dioxide released into the air from cars being driven to school. For each gallon of gas used by these vehicles, 19.4 lbs. of carbon dioxide are emitted into the air.[25]
- Decreased idling which causes concentrated pollution and is of particular concern for children.[26]
- Less reckless driving from hurried parents and fewer potential accidents.
- Healthier children and less stressed parents

Fiscal Impact and Synergies

- The cost in time or money needed to apply for a Lower-Emissions School bus grant.[27]
- Money to subsidize free Community Buses
- Cost of installing bike paths and buying bike racks
- Fewer auto accidents at schools and therefore less need for City police and emergency services
- The cost of implementing the recommendations for relevant infrastructure improvements contained in the City's recently completed transportation study.
- The grants already received by the City from the "Safe Routes to School Program."
- The Bay Area Air District which will pay the required $25,000 to replace pre-1977 buses.[28]

Obstacles:

- Many Mountain View schools draw children from a large geographical area which might make walking or biking difficult.
- Difficulty in getting volunteers to implement alternative transportation programs.
- Persuading parents to participate in those programs.
- Persuading parents it's safe to let their children go to school by other means than by car.

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[24] See: U.S. Environmental Protection Agency (October 2007) *Clean School Bus USA.* And California EPA Air Resources Board (November 27, 2007) *Lower-Emission School Bus Program.*

[25] Environmental Protection Agency (February 2005) *Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle.*

[26] American Lung Association of Santa Clara-San Benito Counties. *Protect Your Kids: Drive Less, Breath Better.*

[27] CA.gov Strategic Growth Plan Bond Accountability, *School Bus Retrofit and Replacement Account.* http://www.arb.ca.gov/bonds/schoolbus/schoolbus.htm.

[28] Lower-Emission School Bus Program. (February 29, 2008). *Proposed Revisions to 2009 Guidelines*, p.2. http://arb.ca.gov/bonds/schoolbus/guidelines/2008lesbpguidelines.pdf.

Partnerships

- Mountain View's Bicycle/Pedestrian Advisory Committee
- California Safe Routes to School Program[29]
- The Mountain View/Whisman School District
- Mountain View-Los Altos High School District
- For a Schoolpooling program in Santa Clara County: VTA, C/CAG of Santa Clara County, S.C. County Transportation Authority, the Bay Area Air Quality Management District, the Metropolitan Transportation Commission.

Mid-Term Priority #3

Title: Establish a Green Parking Code in the General Plan and Zoning Ordinance

Working Group: Transit and Transportation

Statement of Issue:

The zoning code has permeated an oversupply of parking in many parts of Mountain View, and too much land has been paved over in order to accommodate car parking. There are significant opportunity costs in land use potential for a higher and better uses than a parking space. Many economists have argued that so much prime urban land is dedicated to parking that local government parking policies drives up the cost of just about everything, from housing to food; because the true costs of parking are bundled with goods and sold as a package. The zoning code parking requirements are based on traffic engineering trip generation tables, and for the most part, do not account for the usage of alternative transportation modes. Mountain View's Transit Zone, or T-Zone does allow a reduction from these standard parking rates on a case by case basis. There are numerous Precise Plans in Mountain View that also allow for zoning overlays that allow for parking reductions.

[29] www.saferoutesinfo.org

Recommendations

The General Plan Circulation Element should adopt a long-term goal for the reduction in internal combustion engine (ICE) auto vehicle miles traveled (VMT) by 10% over 2005 levels.. A citywide parking study should be undertaken to determine the required supply of parking based on the 10% reduction in VMT. . The Green Parking Code should:

- Adopt maximum parking requirements by land use to reflect the 10% VMT reduction goal
- Consider the needs of neighborhood electric cars and other electric vehicles, and prioritized parking.
- Consider parking site plan that encourage easy walking access and connectivity
- Shared parking incentives
- Consider the availability of on-street parking and restrictions for visitor parking, etc.
- Encourage standards for landscaping, and tree plantings.
- Prioritize and significantly increase bicycle parking supply and locations to encourage local bicycling trips (See separate bicycle parking recommendation)
- Consider metered parking and parking fees in downtown Mountain View and other commercial areas as part of a regional strategy.(See separate recommendation: Long-Term Priority on Regional Paid Parking Program)

Timeline Mid-Term (Adoption in General Plan) Long-Term (Full implementation)

Environmental Impact And Synergy

This recommendation would have a very significant impact on sustainability and GHG emission reductions by both providing incentives for alternative mode usage (NEV, bicycling, walking access) and disincentives to ICE auto use. In the long-term, there would be a likely 5-10% reduction in the amount of land devoted parking utilization.

This recommendation has been developed jointly with Land Use Planning Working Group.

Fiscal Impact

The reduction in parking requirements would have a positive fiscal impact in Mountain View. A July 2006 of parking needs at the Mountain View Station[30] found that the cost of construction of a surface parking lot, without land acquisition, is $7,000 per space. The cost of constructing a parking garage space, without land acquisition, is $25,000 to $35,000 per space.

Parking revenues generated by parking meter and parking lot fees would be utilized to support improvements in alternative transportation strategies in Mountain. See separate recommendation on Regional Paid Parking.

[30] Kimley-Horn and Associates, et al, "Caltrain Funding Priorities Study, Final Working Paper, Mountain View Station Parking Needs," July 2006.

Given fiscal realities, the policy question should be, can we afford the current substantial opportunity costs of devoting so much our land to park automobiles?

Obstacles

There is a general perception among many Mountain View residents that parking supply is insufficient. Reducing parking supply is contrary to current public sentiment. Being able to parking in front of one's own house or apartment is seen as an inalienable right by many. A public policy that ties parking supply to desired parking demand based on a 10% decrease in VMT is a bold initiative, but will come under constant political pressure to increase parking supply.

There is also likely strong public and business community sentiment against paid parking in Mountain View. It is why a broad array of transportation alternatives must be provided at the same time paid parking is implemented.

Financial institutions often require minimum parking supply in order to provide project financing. Some developers may have trouble acquiring project financing with reduced parking requirements.

Partnerships

It would be desirable to work in collaboration with neighboring cities on a Green Parking Code.

Mid-Term Priority #4

Title: Increasing Bus Usage in Mountain View.

Working Group: Transit and Transportation

Statement of Issue

There are many underutilized buses traversing Mountain View while the streets are clogged with single-occupancy cars. This causes traffic jams, green house gases and the need for ever increasing parking spaces. Reasons given for not taking buses include: inconvenience, cost, unreliability, discomfort, unattractiveness, lack of cleanliness, slowness, difficulty in obtaining information and stigma.

Recommendations:

1. Provide transfers on VTA buses, as well as between VTA and Sam Trans, up to and including the advent of the Translink "smart card" in 2009.
2. Provide real-time arrival and departure signage at major bus stops.
3. Designate a bus lane on major thoroughfares such as El Camino.

4. Design more attractive, covered, well-maintained and well-lit bus stops.
5. Clean buses and replace upholstery more frequently.
6. Lower the cost for "regular" customers, i.e., not seniors, juniors or the disabled.
7. Hire a public relations firm, paid for jointly by the City and VTA, specifically to do a marketing campaign to reduce the stigma of riding buses.
8. Partner with the VTA in subsidizing residential eco-passes for multi-unit housing.
9. Increase the use of community buses on less well-traveled routes, i.e., routes that go into the neighborhoods.
10. Start a "Try Transit" program, already in existence in San Mateo County, in which free coupons for transit are given to residents on a one-time basis.[31]
11. Encourage the Metropolitan Transportation Commission to hasten the implementation of its bi-county transit plan (Santa Clara and San Mateo Counties).
12. Institute a Transit Information Center at the train station, possibly staffed by volunteers, which contains written material as well as internet access to www.google.com/transit and www.5ll.org.

Timeline: Mid-term (1-3 years).

Environmental Impact

1) New research shows that a person who rides public transportation instead of driving reduces his or her carbon dioxide output by more than 20 lbs a day (4,800 lbs annually).[32]
2) The need for fewer cars to be built and sold.
3) More transit riders per unit of distance and time.
4) Fewer acres being paved over for parking.

Fiscal Impact

- Reduced road maintenance
- Reduced need to build more parking areas
- More transit riders and therefore more revenue for VTA that could be used to implement other recommendations.
- Money needed from the City to partner with VTA in marketing buses and subsidizing eco-passes for residents.

Obstacles

Cost to the City, in money and staff time, to partner with VTA. .

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[31] www.commute.org

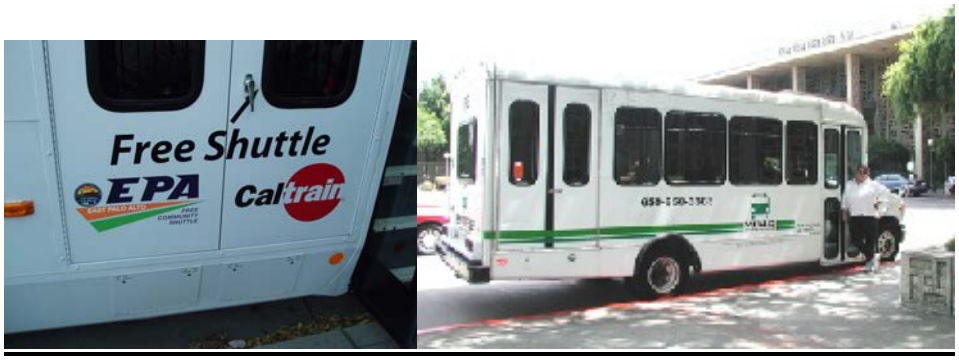
[32] Bay Area Green Supplement, p. 28. *Palo Alto Daily News,* June 29, 2008. Orginal Source: **Public Transportation's Contribution to U.S. Greenhouse Gas Reduction,"** Science Applications International Corporation, September 2007.

Partnerships

VTA and the City of Mountain View. Other possible partners include: C/CAG of San Mateo County, S.C. County Transportation Authority, the Bay Area Air Quality Management District and the Metropolitan Transportation Commission.

Mid-Term Priority #5

Title: Community Shuttle Services



Working Group: Transit and Transportation

Statement of Issue

Mountain View lacks its own shuttle bus system. Such a system should be developed, using hybrid or (preferably) electric vehicles. The current Community Bus system, operated by the VTA, is limited in scope, and infrequent, even during its operating hours, which do not include evenings or weekends. In addition, fares are charged, which limits rider-ship. The fares are lower than other VTA fares, but this is not generally known, and may be a source of confusion to potential users of the system.

Recommendation

We recommend that Mountain View institute its own comprehensive system of frequent electric shuttles, designed to serve the needs of many sectors of the community, including:

- Connections to Caltrain, light rail, and other transport services that go beyond Mountain View.
- Trips that serve students attending elementary, junior and high school in Mountain View.
- Connections for travel around town, including access to shopping, library, medical services, senior center, daycare center and pools without using a personal vehicle.
- Connections to downtown for restaurant patrons (for lunch and dinner).
- Evening and weekend shuttles to entertainment centers, including Shoreline Amphitheater, Century theaters and the Downtown Performing Arts Center. Also to Shoreline Park, and to the Farmer's Market on Sundays.

The design of the system will clearly require considerable study and planning, and the system will doubtless evolve over time. Neighboring Palo Alto continues to refine and redefine its shuttle system[33]. There may be opportunities for coordination between Mountain View and our three neighbor cities of Sunnyvale, Palo Alto and Los Altos, in producing a rational system.

City-run shuttles should ideally be free and available to all (like the Marguerite system run by Stanford University). If that is deemed impossible, a system of prepaid passes could be sold by the city, and made available in multiple locations, including the village centers proposed by the Land Use working group. The system is much more likely to be successful, however, if it is free to all.

Time Frame: Mid- term (1-3 years) solution.

Environmental Impact

- Utilizing the City of Menlo Park annual community shuttle ridership of 73,000 per year as benchmark, we assume that the City of Mountain could attract a similar ridership base. For sake of illustration, we are assuming that 75% of the ridership would be home-based work trip (average of 20 miles), and 25% (average of 3.5 miles) would be local trips A recent passenger survey in Menlo Park found that 22% would drive alone if the shuttle were not available, and another 9 % would carpool. With these assumptions, there would be 100.3 annual metric tons of CO2 reduced by the implementation of a community shuttle program. See Appendix E for calculations. Importantly, in the Menlo Park passenger survey 28% would not make the trip if the shuttle were not available. The mobility benefits for users of a community shuttle could far outweigh the benefits of $C0^2$ reduction benefits alone.

- Reduced need for parking in Mountain View, both at transit connections and at downtown locations

Fiscal Impact

The City of Menlo Park has an annual budget of $350,000 per year for four shuttle routes utilizing clean diesel cutaway shuttles, operating 6,300 annual vehicle hours.[34] The City of East Palo Alto, operates three shuttle services for $425,000 per year, also utilizing clean diesel cutaway shuttles.[35] With the utilization of small clean fuel buses, Mountain View should be able to operate a comparable community shuttle program *with* clean fuel vehicles for a 10-15% cost premium. The annual cost for a community shuttle program is between $475,000 and $550,000 per year.

Obstacles

- People don't like to get out of their cars, but if bus travel is free and they have to pay to drive and park a car then that may be an incentive to change behavior.

[33] http://www.cityofpaloalto.org/civica/filebank/blobdload.asp?BlobID=12084
[34] Debbie Helming, TSM Manager, City of Menlo Park
[35] Mary Flamer, City of East Palo Alto Mobility Manager, City of East Palo Alto.

- Shuttle services planned in the past for Mountain View may not have been successful, but they were not comprehensive in scope, and gasoline prices were not as high as they are now.

Partnerships: VTA, Cities of Palo Alto, Sunnyvale, and Los Altos.

Recommended Long-Term Priorities: Implemented After Three Years

Long-Term Priority #1

Title: Fully implement a network of four Grand Boulevards in Mountain View as part of the General Plan process.

Working Group: Transit and Transportation in collaboration with Land Use Working Group

Statement of Issue

Nineteen cities, San Mateo and Santa Clara counties, and local and regional agencies united to improve the performance, safety and aesthetics of the El Camino Real corridor. The Vision of the Grand Boulevard initiative is that El Camino Real will achieve it full potential as a place for residents to work, live, shop and play, creating links that promote walking and transit and an improved quality of life. The El Camino Grand Boulevard Corridor has the 522/22 high capacity rapid bus. The City of Mountain has endorsed the guiding principles, but is awaiting full endorsement until General Plan process. [36] The City of Mountain View has approved several developments along El Camino that are very supportive of the Grand Boulevard concept, including Avalon Towers, a mixed use development at 399 W. El Camino, the 1.4 acre BMW dealership at 120 E. El Camino and look up most recent approval. Downtown Castro Street has implemented many of the Grand Boulevard Principles.

36 http://www.grandboulevard.net/library/GrandBoulevard/Grand%20Boulevard%20Guiding%20Principles.pdf

Recommendation

The General Plan should consider development of a network of four Grand Boulevards in Mountain View. It is recommended that the Grand Boulevard network be fully fleshed out as part of the General Plan Circulation element. The Transportation Working Group has the following initial input: Two east/west Grand Boulevards: El Camino Real and Middlefield Roads. Recommended north/south Grand Boulevards: From El Camino, Mountain View Transit Station, Shoreline to East Charleston. A second north/south Grand Boulevard might be considered to Moffett Field, depending on the long-term land use developments there. Rengstorff could also be considered in the General Plan process.

Features of each Grand Boulevard should include the following transportation features:

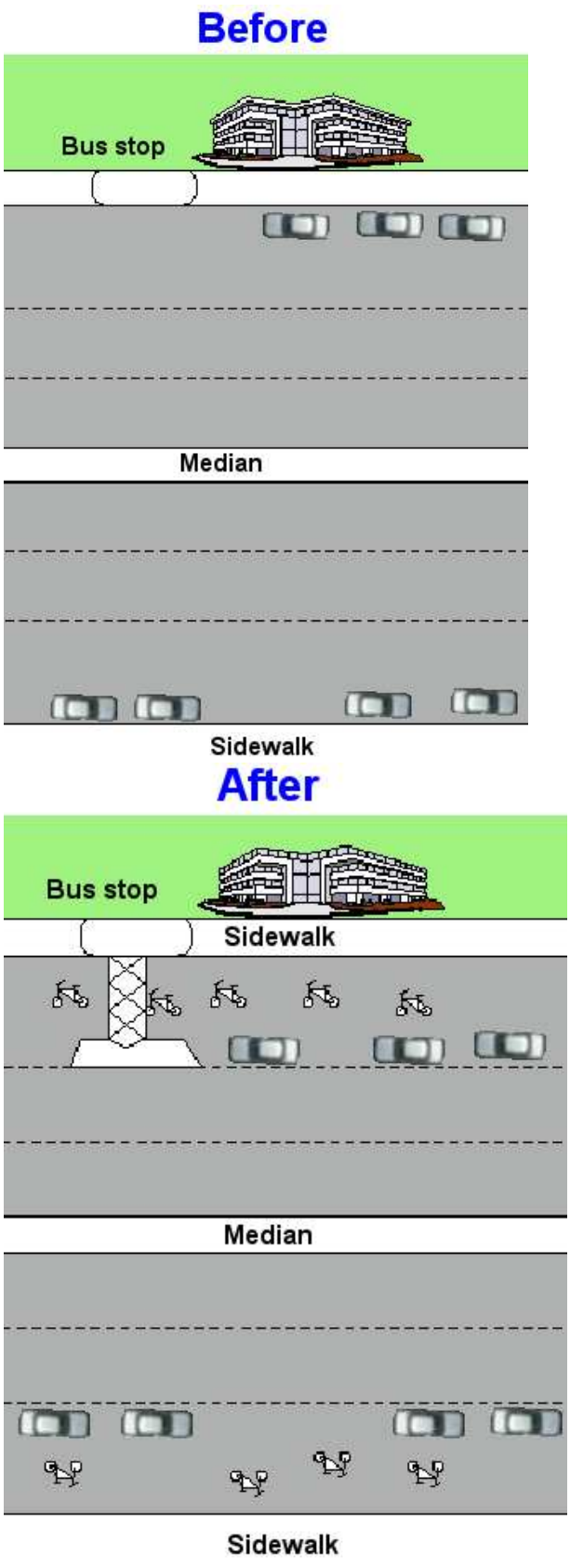
- A high capacity transit service with a minimum of 15 minutes frequency. High capacity options include a streetcar, light rail or rapid bus. Streetcars have more frequent stops and provide more of a neighborhood mobility scale. Exclusive right of way would be optimal. Community transit would provide timed transfer connection. This could be a street car, rapid bus, or light rail.

Eugene, Or. exclusive lane rapid bus.

Portland Streetcar in mixed traffic

- Second partial lane would be devoted to bicycle and pedestrian utilization as utilized in many European cities with parking as a buffer to auto traffic. The following illustration is by a Working Group member on how this might work on El Camino

  - Reduce the three lanes in El Camino Real to 2 lanes, one of them dedicated to public transportation and emergencies (buses, taxis, fire service, ambulances, police)
  - Allow cars to park at the left part of the third lane (the one closer to the curb). This will create an empty space between the parked cars and the curb. This extra space is to be used by bikers. (And maybe walkers?)
  - The cars parked at the left side of the third lane (instead of at the right side of it, as now) will also provide a buffer for cyclist to make their trip safer. This is illustrated on the next page



Historically El Camino Real was used to walk from mission to mission. Missions were located at 1 day walking trip to each other. It is ironic that nowadays El Camino Real in Mountain View is almost unsuitable for walking, and just impossible for biking. Is this fair to its history?

Have you ever tried to bike in this corridor? It is almost impossible. Using the sidewalk is seriously difficult, being so narrow, having the pedestrians (when any) the right of way and continuously going up and down in the irregularities created by the tree roots in the concrete pavement. Using the road is insane: There is always a dense traffic of careless drivers continuously passing by, while the adventurous cyclist has to avoid parked vehicles (and the possibility of car doors suddenly being opened) on his/her right, and buses and cars on the right.

An amazing simple and cheap solution is to close one lane for car transportation and use it more wisely making mandatory for cars to park on the left of the closed lane, so there will be a buffer between the parked cars and the sidewalk. This "buffer" will be a bike lane, safely insulated from the busy traffic by the parked cars.
Dedicating this lane to bikes will also send the right message to the citizens: bikes and cars should and will share the road.

History lovers will be also happy to know that El Camino Real will be, once again, suitable for "muscle powered" transportation. In the future it might even be a major attraction for tourists, going all the way from San Diego to San Francisco by bike, as tourists do today with "El Camino de Santiago" going all the way from France to Western Spain.

- Streetscape and walkability standards would be adopted to connect adjoining neighborhoods to the Grand Boulevard.
- Similar to downtown Castro, one lane in each direction for auto traffic, allowing for left turn movements.
- Full adoption of the Grand Boulevard Guiding Principles for Land Use considerations.
- Endorsement and Mountain View participation in funding Assessment of El Camino Real Economic and Housing Opportunities.

Timeline: Long Term

Environmental Impact and Synergy

This recommendation was developed in collaboration with the Land Use Working Group. The focus here is on the transportation components of the Grand Boulevards

If adopted, would provide a framework for the redevelopment of the urban fabric and the mobility system in Mountain View. The emphasis of these corridors would be walkability, bikeability, and moving people though the corridor on fast and convenient high capacity options.

Fiscal Impact

As mentioned above, the Grand Boulevard Initiative on El Camino Real is currently attempting to fund an assessment of the economic and housing opportunities along the El Camino corridor. When this study is completed by economic experts, it will provide quantitative data on potential fiscal impact of the network of four Grand Boulevards that the Transit and Transportation Working Group is recommending.

Obstacles

Shoreline, Middlefield, Moffett Blvd. and El Camino are major arterials that move substantial volumes of auto traffic in Mountain View. The large majority of Mountain View residents are currently dedicated ICE auto users. While the Grand Boulevards would be multimodal in nature, as envisioned they would slow down traffic, reduce the volume, and emphasize the feet first access. This recommendation flips the modal priorities of these arteries and would require a wholesale shift in mindset of residents, the business community, and elected officials.

Long-Term Priority #2

Title: Regional Paid Parking

Source: City of Redwood City

Working Group: Transit and Transportation

Statement of Issue:

All municipal on-street and off-street parking is free in Mountain View. Most public parking in the or near the historic retail core (the Castro Street blocks between Evelyn and California Streets) is provided in eight permanent Parking District lots, two parking structures , plus on-street parking. A 1999 parking study found that "midday peak occupancy rate in the Parking District facilities were 93% in 1999, down from 97% in 1996. . Parking policies are complex, and need to consider supply, demand and pricing. The later element is not discussed as a strategy in the 1999 downtown parking study. The guru on parking policy Donald Shoup, professor at UCLA, estimates that estimates the cost of free parking to the national economy is over $300 billion annually. Retail centers do not want to be at a competitive disadvantage and this is why I'm suggesting a sub-regional approach. The City of Redwood City has adopted innovative parking meter pricing to discourage auto use.

Recommendation

The City of Mountain View City Council should approach neighboring cities to develop a collaborative pricing and parking policy plan as implementation measure to each individual cities environmental sustainability task force. Each city should appoint three citizens representing neighborhood, business and environmental interests to the task

force, supported by a technical advisory committee from each city. This subregional Green Parking Task Force would have one year to make a recommendation and presentation to a combined meeting of the City Councils.

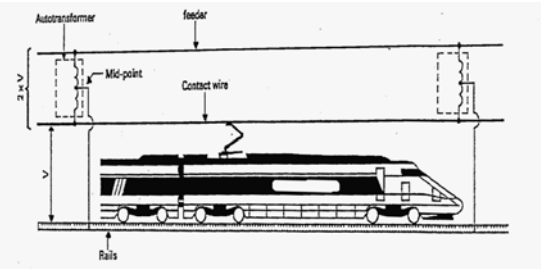
Timeline: Short Term

Environmental Impact and Synergy: Dependent on the recommendations of the Subregional Green Parking Task Force. However, it is unlikely that a 10% reduction in ICE vehicle miles travelled can be achieved without parking pricing strategies.

Obstacle: The obstacles to implementing metered and paid parking on its own is enormous. However, the recommendation to provide a subregional collaborative effort along the peninsula, and implement its recommendations is significantly more palatable.

Long-Term Priority #3

Title: Electrify Caltrain



Working Group: Transit and Transportation

Statement of Issue: Electric trains can accelerate and decelerate at better rates than diesel powered trains, even with a larger number of train cars. Given Caltrain's close-set station stops, a substantial portion of a Caltrain trip is spent accelerating and decelerating between stations. This would be expected to increase under continued diesel operations, as train consists get longer. Electrifying the Caltrain service would enhance its consumer appeal and would likely increase ridership beyond estimates based upon improved travel time alone. An electrified Caltrain can provide real travel time reductions and improve the overall system by increasing capacity and allowing increased levels of service. These travel time savings are expected to stimulate additional ridership, reducing vehicle miles of travel and congestion on Peninsula roadways. Reducing auto use will also improve regional air quality and reduce parking demand in Mountain View

Recommendation: The City Council should strongly support and advocate for the electrification of Caltrain a high priority capital improvement.

Timeline: Long-Term

Environmental Impact and Synergy: According to the City of Menlo Park: Electrification of the CalTrain line will produce 1/3 the carbon emissions of the existing line.

Fiscal Impact: The total infrastrucuture investment for electrification is estimated at $471 million. The project is being managed by the Joint Powers Board (JPB,Caltrain). Mountain View is part of VTA, which is a member of the JPB. Funding is normally federal funding with local match.

Obstacles: The most significant obstacle is funding priorities.

Long-Term Priority #4

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Title: Fully Implement Bicycle Boulevards.

Working Group: Transit and Transportation Working Group.

Statement of Issue

To increase the bicycling option for city wide transportation while reducing the need to drive, there needs to be a network of long distance arterials especially designed for bicycles throughout the city and in the principle directions. These bicycle arterials are typically called “bicycle boulevards”.

Recommendation

Study the performance of the existing trial bicycle boulevard and implement the lessons learned to make that permanent. Then for the long term, use this first bicycle boulevard as a standard for implementation of the complete bicycle boulevard network. The current bicycle boulevard and the tentatively proposed complete network of these bicycle boulevards can be found in the “2008 BICYCLE TRANSPORTATION PLAN” adapted in May, 2008 by the City.

As the village concept being suggested by the Land Use Working Group manifests, these boulevards would be routed to provide the most efficient connectivity between the villages and other key points in the city.

Environmental Impact

Impacts for this recommendation are:

- The greater use of the bicycling option will reduce the use of the GHG emitting vehicle option
- The reduced need for street maintenance because of the lighter vehicles being used would reduce the need for use of construction and construction support equipment and also further reduce GHG emissions thereby as well as the use of paving materials (usually petroleum or other non-sustainable material based).
- Village interconnectivity using bicycle boulevards would make bicycling competitive with the use of other modes for getting around in the city, thus reducing the emissions further.

Fiscal Impact

Once these routes are implemented, there would be reduced maintenance costs for roads designed for automotive use.

Obstacles

Potential obstacles are:

- The route suitable for a bicycle boulevard would not be suitable for through automotive traffic in order to make bicycling attractive and safe. Through automotive traffic would have to focus on the use of arterials built for automotive use; some neighborhood loss of automotive convenience could result.
- There is a lack of direct street continuity across El Camino Real and some other arterials to some extent, thus requiring route constructions along a median or some such and the moderate costs thereof.
- There are other barriers such as freeway, railroad, and creek routing, thus requiring greater costs for grade separations.

Partnerships

The MV BPAC, neighborhood associations, and developers (for village conversions from shopping centers) could contribute to make the boulevard network more effective.

3. Other Ideas

Recommendations Under Review

Title: Walkability and biking issues in various Mountain View locations

Working Group: Mountain View Transit and Transportation

Statement of Issue

Information provided to the task force indicates that roughly 50% of greenhouse gas emissions produced in the city result from the transportation sector. Accordingly, reducing the amount of travel that requires the use of gas powered vehicles should be a clear priority for actions taken by city government and our community to address climate protection.

The remainder of this section provides various recommendations that the task force would like the City to consider with regard to improving walkability and biking experiences in Mountain View with the goal of encouraging less travel by motor vehicle. The section is organized as follows:

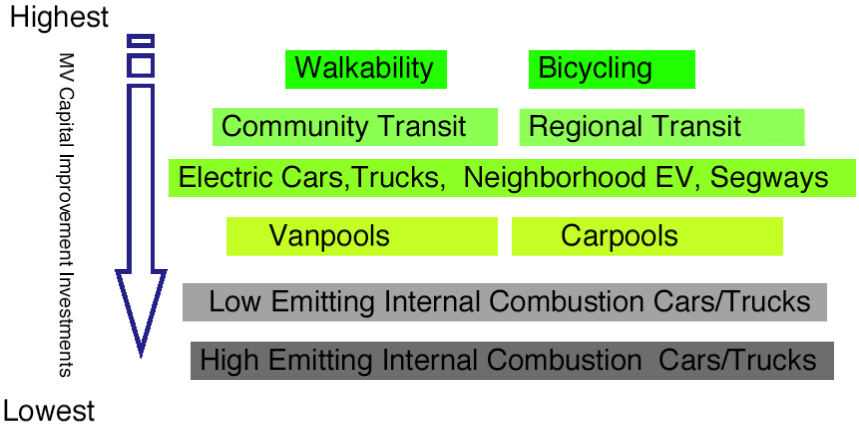
- Developing or revising Levels of Service (LOS) calculations for City operations
- Developing a specific Pedestrian Master Plan for the city
- Walkability issues related to the intersection of Villa Street and Bush Street
- Walkability issues related to the intersection of West Evelyn Avenue and Bush Street
- Walkability issues related to the intersection of West Evelyn Avenue and Hope Street (adjacent to the CalTrain station)
- Walkability issues related to the intersection of West Evelyn Avenue and View Street
- Walkability issues related to Castro Street
- Walkability issues related to South Shoreline Boulevard
- Walkability issued related to Showers Drive
- Adding a new bike path to connect the Whisman Park neighborhoods with the shopping resources at Grant Road and El Camino Real
- Walkability issued raised during the Leadership Mountain View (LMV) Walkability Workshop
- City-wide walkability issues

Note: The information in this section is elaborated on and illustrated in Appendix D. References to this appendix are included where the additional information is especially crucial or informative.

Recommendations (Note: These are the recommendations of one Working Group member. While the broad recommendation of improved walkability has been fully endorsed by the full Working Group, the individual specific recommendations presented below still need to be reviewed and discussed by the full Working Group.)

Developing or revising Levels of Service (LOS) calculations for City operations

A primary goal of the Transit and Transportation working group is for the city to implement a paradigm shift regarding travel mode investment priorities. This concept is illustrated in the following figure:



To best ensure that these priorities are realized at all levels of City planning and implementation, the task force recommends that the City develop or revise their Levels of Service (LOS) calculations for City operations. This is a short term recommendation.

Developing a specific Pedestrian Master Plan for the city

This topic is discussed at length in a separate recommendation, "Adopt and Implement a Pedestrian Master Plan."

Walkability issues related to the intersection of Villa Street and Bush Street

The intersection of Villa Street and Bush Street is another location that is especially confounding and potentially hazardous to pedestrians, as you can see in the photo to the right.

The task force recommends that the City implement major reconfigurations at this intersection including but not limited to improved marking or signaling.

Depending on the actions taken, this is a short to medium term recommendation.

Walkability issues related to the intersection of West Evelyn Avenue and Bush Street

The intersection of West Evelyn Avenue and Bush Street is especially confounding and potentially hazardous to pedestrians, as you can see in the photo to the right. There are to many lights pointed in too many directions. The task force recommends that the City implement major reconfigurations at this intersection including but not limited to

improved marking or signaling. Depending on the actions taken, this is a short to medium term recommendation.

Walkability issues related to the intersection of West Evelyn Avenue and Hope Street (adjacent to the CalTrain station)

Issues related to the intersection of West Evelyn Avenue and Hope Street at the CalTrain station

- No crosswalk exists at the west entrance to the train station crossing south even though there is a signal there for traffic to leave the station.
- No traffic light exists for those traveling west on West Evelyn past the west entrance to the train station so pedestrians can see the lights changing; same thing going east on West Evelyn at the same intersection.
- The crosswalk from the train station crossing West Evelyn is set way to the east, so that it isn't easily accessible to people leaving from and arriving at the train station.

The task force recommends that the City implement various crosswalk and signal reconfigurations at this location including improving crosswalk visibility. Additionally, improving signal timing for pedestrians crossing West Evelyn Avenue during Sunday Farmers Market hours is recommended. Also, improved signal timing in the crosswalk on West Evelyn southwest of the CalTrain Station is very poor for pedestrians and bicyclists, and jaywalking southwest of the intersection is common. Accordingly, the task force recommends adding a well marked crosswalk as noted in a figure included with the related appendix. This is a medium to long term recommendation.

Walkability issues related to the intersection of West Evelyn Avenue and View Street

At the intersection of West Evelyn Avenue and View Street, the crosswalks are not signaled in any direction. As this is both a primary entry point to the train station and to the Sunday Farmers Market, traffic signals that are, at the very least, active during peak commute times and during the Farmers Market are highly recommended. The task force recommends that the City add signals at this location with queue timing adjustments included as noted here. This is a medium term recommendation.

Walkability issues related to Castro Street

All of the following taken together are a short term recommendation.

- The crosswalk at Castro Street by Starbucks is not signaled. The task force recommends that the City improve marking or signaling at this point.
- The crosswalks at Castro Street by Amici's Pizzeria are not signaled. The task force recommends that the City improve marking or signaling at this point.
- The parking pattern for cars at this point on the southeast side of Castro Street between Church Street and El Camino Real is hazardous for bicyclists as it's difficult for drivers to see them as they are backing out and difficult for bicyclists to anticipate what drivers might do. With this configuration bicyclists might move to the sidewalk, thus posing a hazard to pedestrians. The task force recommends that the City reconfigure these parking spaces for parallel parking only.
- The parking pattern for cars at this point on the northwest side of Castro Street between Church Street and El Camino Real is hazardous for bicyclists as it's difficult

for drivers to see them as they are backing out and difficult for bicyclists to anticipate what drivers might do. With this configuration bicyclists might move to the sidewalk, thus posing a hazard to pedestrians. The task force recommends that the City reconfigure these parking spaces for parallel parking only.

Depending on the actions taken, these are short to medium term recommendations.

Walkability issues related to South Shoreline Boulevard

- Along Shoreline Boulevard at Snow Street one crosswalk exists at the southwest end of Eagle Park, but it is not signaled. And not crosswalk exists leading to one of the Shoreline entrances to the park as noted in the photo. The task force recommends that the City add one more crosswalk with signals, improve crosswalk visibility, and consider various traffic calming features on Shoreline Boulevard between California Street and El Camino Real. This is a medium to long term recommendation.
- Cars seem to speed up as they approach El Camino beyond California Street, which is at odds with the fact that, on one side of Shoreline are the library, two parks, the Performing Arts Center, City Hall, and the "slow flow" section of Castro Street, and, on the other side of Shoreline, a large expanse of residential neighborhoods. The task force recommends that the City narrow the three southbound lanes of Shoreline above Mercy (where an unsignaled crosswalk exists). The left turn lane going east on Church would shift in a lane, and the medians along that stretch would all be expanded. As shown in the related appendix, note the lane closure arrows at the top right, the shifted turn lane about two thirds of the way down, and the expanded medians. This is a long term recommendation.

Walkability issued related to Showers Drive

Showers Drive is currently not very pedestrian friendly. In spite of running between two major shopping destinations (San Antonio Shopping Center and Target) only one crosswalk is in place, and it is at a far southwest point on the road relative to the stores, and the crosswalk lacks signals. The task force recommends that the City add crosswalks with signals, improve crosswalk visibility, and consider various traffic calming features on Showers Drive between California Street and Latham Street. This is a long term recommendation.

Adding a new bike path to connect the Whisman Park neighborhoods with the shopping resources at Grant Road and El Camino Real

Currently in Mountain View, adequate bike/pedestrian paths linking the Whisman Road/Whisman Station area to the intersection of Grant Road and El Camino Real do not exist. The task force recommends that the City add a new path, as described below, which could help to improve this situation. This recommendation is described in detail in the related appendix. This is a long term recommendation with a very high cost.

NOTE: This suggestion was raised as part of the Mountain View General Plan Update public meeting process.

Walkability issued raised during the Leadership Mountain View (LMV) Walkability Workshop

The following details are those that the task force believes that the City should address in particular, but they are a subset of the report that the LMV group should have filed with the Mountain View Bicycling and Pedestrian Advisory Committee (BPAC).

- At the Senior Center on Escuela Avenue, a number of hazards exist for bicyclists and pedestrians, who might be traveling to and from the Senior Center, the Day Care Center, or Rengstorff Park. The primary hazards are due to multiple destinations served by one driveway and mixing traffic types on one relatively narrow passage. The task force recommends that the City or property owners redesign this passageway as needed to improve its safety features. This is a medium term recommendation.
- At least one gate remains unlocked and open, which encourages apartment tenants next door to use the Senior Center parking lot for extended tenant parking. The task force recommends that the City compel associated property owners or landlords to secure gates such as these (while allowing that the gates might be left open to allow access by apartment tenants to the Senior Center, in which case, it's the parking infractions themselves that must be addressed). This is a short term recommendation.
- One type of hazard, especially for disabled individuals and those with infant strollers, are posts that are placed too far into the sidewalk. This is especially prevalent around Rengstorff Park, as noted during the LMV Walkability Workshop. The task force recommends that the City relocate or remove sidewalk barriers as needed throughout the city. This is a medium term recommendation.
- Also prevalent around Rengstorff Park are single sidewalk ramps serving two crosswalks. To best serve, in particular, disabled individuals and those with infant strollers, the task force recommends that the City replace the single ramp with one for each crosswalk as needed throughout the city. This is a medium term recommendation.
- One detail that was noted during the Walkability Workshop was a least one crosswalk that remained partially unpainted after road paving work was completed (California Street and Rengstorff Avenue). This crosswalk remains in the same condition as of May 2008. The task force recommends that the City restripe this crosswalk and any others like it in Mountain View as soon as possible. This is a short term recommendation.
- At the intersection of Escuela Avenue and Gamel Way at the entrance of Castro Elementary School, which experiences a fair amount of mixed traffic at the beginning and end of the school day, the crosswalk is marked to the sidewalk, although the edge of the road is used marked as a bike lane. This could pose a hazard both to pedestrians and bicyclists. The task force recommends that the City reconfigure this crosswalk and any others like it in Mountain View as soon as possible. This is a medium term recommendation.

City-wide walkability issues

- Laws related to cars blocking sidewalks need to be created or actively enforced. Such obstacles are a nuisance to pedestrians generally, but are clearly problematic for visually impaired individuals and those with infant strollers. The task force

recommends that the City take the appropriate steps to correct this problem as soon as possible. This is a short term recommendation.

- Laws related to landscaping that prevents drivers exiting parking lots and driveways from seeing sidewalk traffic before blocking the sidewalk need to be created or actively enforced. The task force recommends that the City take the appropriate steps to correct this problem as soon as possible. This is a short term recommendation.
- Locating bus stops and other sidewalk furniture such that drivers entering from an adjacent side street cannot adequately see oncoming traffic without blocking the crosswalk should be avoided. Where such obstacles are identified, the City should compel the responsible agency to correct the problem. The task force recommends that the City take the appropriate steps to correct this problem as soon as possible. This is a short term recommendation.
- To best encourage walkability in Mountain View, the City should ensure that sidewalks are safe or perceived as safe for pedestrians. Unfortunately, it is very common for bicyclists, skateboarders, etc. to use the sidewalks as well thus posing a potential hazard (if not a less pleasant experience) for pedestrians they encounter. the task force recommends that the City enforce existing laws (such as SEC. 19.51 in the City code [38]), that such laws be enhanced as needed, and that the City explore the reasons why bicyclists and the like feel compelled to ride on the sidewalks. The task force recommends that the City take the appropriate steps to correct this problem as soon as possible. This is a short term recommendation.
- To help make crosswalks more safe and perceived as being more safe, the task force recommends implementing raised crosswalks, speed tables, and visual features, such as brickwork, for as many crosswalks as possible. Further, we recommend that chicanes, bulbouts, and the like are favored over speed bumps, which encourage drivers to speed up between bumps and slow to a crawl prior to the bumps. As this would be an ongoing efforts, no timeframe is applicable.
- To help make crosswalks more safe and perceived as being more safe, the task force recommends implementing raised crosswalks, speed tables, and visual features, such as brickwork, for as many crosswalks as possible. Further, we recommend that chicanes, bulbouts, and the like are favored over speed bumps, which encourage drivers to speed up between bumps and slow to a crawl prior to the bumps. As this would be an ongoing efforts, no timeframe is applicable.
- To help make walking in Mountain View more user-friendly, the task force recommends that the City implement passive pedestrian detection in as many signaled crossing points as possible. According to the Valley Transportation Authority (VTA): "Passive pedestrian detection devices monitor the presence of pedestrians to permit an extension of the crossing time interval. Pedestrians entering the curbside detection zone will activate the pedestrian call feature." As this would be an ongoing efforts, no timeframe is applicable.
- To provide a safer and more pleasant walking experience around town, the task force recommends that the City implement "pedestrian scrambles" (the concept is also known as "Barnes Dance" and "exclusive pedestrian phase") in appropriate locations

[38] SEC. 19.51. Riding bicycles on sidewalks prohibited. No person shall ride a bicycle upon any sidewalk in the business district. (Ord. No. 175.587, 1/25/60.)

within Mountain View. As this would be an ongoing efforts, no timeframe is applicable.

There were two ideas that were fully developed by Working Group members that did not received a majority vote for inclusion into the recommended priorities.

Idea Not Included as Priority Recommendation #1

Title: Synchronized Traffic Signals

Working Group: Transit and Transportation

Statement of Issue

The traffic signals on many of the busiest streets in Mountain View are set in such an unsynchronized way that even cars which are driving the speed limit must stop many times. This not only adds more GHGs to our environment, it causes drivers to become impatient and drive irresponsibly "trying to beat the light." In an attempt to avoid such delays, drivers frequently turn away from the arterials onto neighborhood streets. This poses environmental, as well as quality-of-life issues for the people in those neighborhoods.

This issue received significant discussion and debate during four different working group sessions, including one with the City of Mountain View staff.

Pros and Cons

Pro: Review the setting of traffic lights on the main arterials in Mountain View, e.g., Middlefield Rd., Rengstorff Ave., Shoreline Blvd., San Antonio Road, Grant Road, California St. with the purpose of resetting them for the maximum flow of vehicles going the speed limit. It has been shown that traffic signal timing accounts for 5-10% of all traffic delay. This amounts to 295 million vehicle hours of delay on major roadways alone.[39] Although the lights on some Mountain View arterials have been adjusted, grants have been received to do adjustments on at least one more street.[40] Other grants for other arterials should be applied for because studies have shown that the benefits of investments in traffic signal systems outweigh the cost by 40:1 or more.[41]

Con: A slight majority (4-3) of the Working Group voted against including this recommendation as a priority. The majority view is that under Feet First...Power by the

[39] "Temporary Losses of Highway Capacity and Impact on Performance: Phase 2" Report No. ORNL/TM-2004/209. Oak Ridge, TN, USA: U.S. Dept of Transportation (U.S. DOT), Oak Ridge National Laboratory, November 2004.
[40] Private communication with Mike Vroman, Traffic Engineer with the City of Mountain View, June 27, 2008.
[41] *Benefits of Retiming Traffic Signals:An ITE Informational Report.* Washington, D.C: Institute of Transportation Engineers (ITE), 2005.

Heart priorities, investments in improving the speed of internal combustion engines encourages increased auto use and is therefore not a priority investment of the Working Group. The majority would rather see investments in walkability and bikability that support the Village Center concept recommended by the Land use Group. In the Grand Boulevard recommendation, bicyclists, pedestrians, and high capacity transit infrastructure would receive priority over this more traditional traffic engineering alternative to CO_2. Signalized priorities and additional green time should be provided to pedestrians, bicyclists, and buses in the view of the majority of the working group. In the majority opinion, signal synchronization would be a counter-productive measure to reducing VMT by 10%, a key working group objective.

Timeline: Medium and long term.

Environmental Impact

1) A reduction in GHGs created while cars idle at red lights.
2) A reduction in driver impatience and therefore less reckless driving.
3) An increase in the number of cars maintaining the speed limit which will reduce the number of GHGs emitted.
4) A reduction of cars using neighborhood streets as arterials. This will reduce neighborhood air pollution and help avoid potential accidents by speeding cars.

Fiscal Impact

- The cost of doing a study to review traffic signal settings.
- The savings in police time used to track and pull over red light runners.
- Reduction in the number of accidents and therefore the use of City emergency personnel.
- Reduction in the number of hospital emergency room visits
- The savings accrued from not needing to install cameras at intersections.
- The cost of implementing the resetting.
- Administrative cost.
- Cost of applying for more grants.

Obstacles

- The cost of staff time and/or the cost of hiring an outside company to do the study.
- The actual cost of resetting the lights.

Idea Not Included as Priority Recommendation #2

Title: Traffic calming

Working Group: Transit and Transportation

Statement of Issue

Need to recognize Neigborhood Traffic Management Plan effort by the City.
The main reason why people use private cars for transportation is just because it is very convenient. Promoting biking and walking is possible, but if the competitor is a very convenient and comfortable ride in a car, this promotion might be difficult. An alternative and very effective approach is to discourage the use of private cars by making it more difficult, slower and, overall, less convenient to use that way of transportation. This 'traffic calming' alternative will also increase the overall quality of life by making roads less congested, streets safer and decreasing noise pollution.

Discussion

- Reduce the speed limit in every Mountain View street by 5 to 10 mph. (short)
- Extensive use of speeds bumps and elevated crosswalks. (medium)
- Move car sensors (loop detectors) back in lanes approaching traffic signals. (large)

A majority of the Transit and Transportation Working Group felt that reducing the speed on every Mountain View street by 5 to 10 mph was impractical.

Environmental Impact

- Transportation accounts for 40% of the GHG in the Bay Area. This means that even a small reduce of 25% in trips will produce a net save of 10% total GHG emissions.
- Improve safety for pedestrians and bikers.
- Reduce traffic congestion, noise pollution and air pollution.

Fiscal Impact and Synergies

The cost of this measure can be kept low by recycling the maximum speed signs whenever possible. For instance a street going from 35 to 30 mph can just use the signs of a street that is going to change from 30 to 25mph. The cost of speed bumps and elevated pedestrian crosswalks (very large speed bumps with a pedestrian cross on top of them) can be kept under controlled by implementing them in successive steps as new budget becomes available.

The impact cost of moving the loop detectors (to avoid drivers speeding up to trigger the green light as soon as possible) is probably higher.
This recommendation is synergetic with the '100% renewable energy' recommendation of the SQoL group.

Obstacles

- The cost/benefit of moving loop detectors is probably not good.
- Drivers might opposed and protest measures to discourage the use of cars.

Partnerships

Bay area bikers

COMPILED LIST OF TRANSIT RECOMMENDATIONS

1. Encourage Mountain View companies to promote the use of Vans, Carpools and telecommuting (sent to Communication Working Group for consideration as a priority recommendation).
2. Promote the use of All-Electric vehicles within the city, including purchasing them for city use, and offering incentives to delivery companies, e.g., UPS.
3. Promote and purchase vehicles using "Stop Start" Technology.
4. Be the first city to declare itself Pro-electric vehicle.
5. Rescind ordinances limiting the use of personal electric vehicles in the City.
6. Pass an Anti-Idling Ordinance.
7. Provide information about Public Transport, including a carbon calculator, on the City Website.
8. Promote carbon-neutral access to Mountain View Caltrain Stations via free electric shuttles.
9. Require drive-through businesses to post signs requesting that customers shut off idling engines.
10. Encourage the City Service Fleet to use Neighborhood Electric Vehicles (NEVs) as much as possible when carrying out city services.
11. Encourage walking to the Farmer's Market by implementing more frequent pedestrian crossing signals and posting crossing alert signs on nearby streets.
12. Waive or reduce parking requirements for NEV's within the City.
13. Encourage VTA to increase the number of routes and service frequency.
14. Provide easy ways for drivers to know that their tires are properly inflated.
15. Implement "Pedestrian Scrambles" for safer and more pleasant walking experiences.
16. Provide more frequent walk signals triggered by green light sequences on all traffic lights.
17. Close Castro Street to cars from the Central Expressway to Church Street, i.e., create a Castro St. Mall.
18. Institute a City-wide Traffic Calming Program (see Page 47).
19. Enforce garage parking ordinances for multiple-use housing to free-up the streets for bikes and pedestrians.
20. Breach the barriers for bikes and pedestrians on streets that do not match up, e.g., when crossing El Camino, the Central Expressway and the Caltrain tracks.
21. On streets with 2 or more lanes, increase sidewalk size by decreasing the number of lanes and creating a bike lane on part of those extended sidewalks.
22. Create a carpool lane on all streets that have 2 or more lanes.
23. Create safe walking at night and on week-ends by having some streets patrolled by police, e.g., Castro St., El Camino.
24. Discourage the use of cars in popular areas by: decreasing parking spaces, limiting the maximum speed, increasing speed bumps, creating elevated crosswalks and roundabouts, reducing the number of traffic lanes and changing some streets to one-way only.

25. Synchronize traffic signals on all major arterials, e.g., California St., Grant Rd., Rengstorff Ave., Middlefield Rd (see Page 44).
26. Provide flashing yellow warning lights and lit crosswalks where there is no traffic signal.
27. Make more traffic signals "motion sensitive" on well-traveled streets, e.g., California, San Antonio, Mayfield and Central Expressway.
28. Provide an access ramp to the Stevens Creek Trail on the east side of El Camino.
29. Add more visual cues for car drivers on bike lanes.
30. Enforce the "no right-turn-on-red" law at traffic lights where it applies.
31. Consider having fewer traffic lights at some intersections, e.g., Bryant at California and Castro at California, and transitioning those which remain to flashing yellow/red after 11 P.M.
32. Consider having a taxi license fee that varies according to the fuel efficiency of the vehicle.
33. Encourage Caltrain to add more tracks in Mountain View in preparation for the advent of High Speed Rail.
34. Attempt to influence the state to pass legislation that increases gas taxes and varies car registration fees according to fuel efficiency.
35. Establish partnerships with VTA, Caltrain and the Center for Collaborative Policy to help enact these recommendations.
36. Provide an electric vehicle refueling station at City Hall.
37. Consider buying carbon off-sets for air travel done by City Staff.
38. Consider instituting a "Travel Choice" Project in which volunteers visit households to educate residents about alternative transport options.
39. Consider changing the ordinance that requires 2 parking spaces per residence.
40. Encourage Caltrain to add another bike car to its commute trains.
41. Provide special parking places on the first floor of City-owned garages for electric and hybrid cars and bicycles.
42. Maintain bike paths on the streets, e.g., fill in potholes.
43. Encourage Caltrain and VTA to synchronize their schedules to lessen wait time when transferring from one mode of public transport to another.
44. Designate one lane of El Camino for rapid buses and emergency vehicles and allow cars to park between that lane and the sidewalk to provide a buffer for pedestrians and bikers.
45. Position Mountain View as a hub of alternative transportation awareness by sponsoring resident workshops, courses and eco-driving competitions as well as putting information on the City website (forwarded to the Communication Working Group for consideration as a priority recommendation).
46. Reduce the number of parking spaces downtown and allot that space to bikers, walkers and outdoor terraces.

Appendix A
Transit and Transportation Working Group Members And Acknowledgements

- Cliff Chambers, Chair
- Shirley Ingalls
- Bruce England
- Jennifer Anderson
- David Paradise
- "Nacho" Martin-Bragado
- Les Montavon
- John Carpenter
- Deb Henigson, Land Use Planning chair, and liaison to Steering Committee

City of Mountain View staff and public agency staff who generously met with Task Force members:

Joan Jenkins, City of Mountain View
Jessica von Borck, City of Mountain View
Mike Vroman, City of Mountain View
Corinne Goodrich, SamTrans
Name, VTA
List under construction

APPENDIX B

California Air Resources Board *Climate Change Draft Scoping Plan,* June 2008.

California Light-Duty Vehicle CHG Standards: Assembly Bill 1493 (Pavley, 2002) directed ARB to adopt vehicle standards that lowered greenhouse gas emissions to the maximum extent technologically feasible, beginning with the 2009 model year. ARB adopted regulations in 2004 and applied to the U.S. Environmental Protection Agency (U.S. EPA) for a waiver under the federal Clean Air Act to implement the regulation. The Pavley regulations incorporate both performance standards and market-based compliance mechanisms. California requires reductions in greenhouse gas emissions from vehicles weighing less than 10,000 pounds. The standards start in model year 2009, and ramp up to a 30 percent reduction in greenhouse gas emissions for vehicles sold in model year 2016 and beyond. To date, these rules have been adopted by 12 additional states that, with California, represent about one-third of the nation's registered automobiles. 4 California's standards are stated as grams of greenhouse gases per mile and do not directly equate to miles per gallon. They require greenhouse gas emissions to be reduced and do not regulate fuel economy. The California Air Resource Board plans to adopt a second, more stringent, phase of the Pavley regulations. Implementing the Pavley vehicle standards will by far have the most impact on GHG emissions in the transportation sector. However, in addition to delivering greenhouse gas reductions, the standards will benefit California drivers by ultimately saving them an estimated $30 each month in avoided fuel costs.

Low Fuel Standard: In Executive Order (S-1-07), Governor Schwarzenegger called for the development of a Low Carbon Fuel Standard (LCFS), which would reduce the carbon intensity of California's transportation fuels by at least ten percent by 2020. The LCFS will incorporate market-based compliance mechanisms to provide flexibility to fuel providers while meeting the emission reduction goals.

Vehicle Efficiency Measures: Several additional measures could reduce light-duty greenhouse gas emissions. For example, measures to ensure that tires are properly inflated can both reduce greenhouse gas emissions and improve fuel efficiency. ARB is pursuing a regulation to ensure that tires are properly inflated when vehicles are serviced. In addition, the California Energy Commission is developing a tire tread program focusing first on data gathering and outreach, then on potential adoption of minimum fuel-efficient tire standards. ARB is also pursuing ways to reduce engine load via lower friction oil and reducing the need for air conditioner use. Mountain View's Transportation Awareness program can incorporate these efforts at the local level.

Heavy and Medium Duty Vehicle Regulations: Medium- and heavy-duty vehicles account for approximately 20 percent of the transportation greenhouse gas inventory. A regulation to require retrofits to improve the fuel efficiency of heavy-duty trucks could include devices that reduce aerodynamic drag and rolling resistance. Hybridization of medium- and heavy-duty vehicles would also reduce greenhouse gas emissions again

through increased fuel efficiency. This measure would likely achieve the greatest benefits on trucks used in urban, stop-and-go applications, such as parcel delivery trucks and vans, utility trucks, transit buses, and other vocational work trucks.

High Speed Rail: A high speed rail (HSR) system is part of the statewide strategy to provide more mobility choice and reduce greenhouse gas emissions. This measure supports implementation of plans to construct and operate a HSR system between Northern and Southern California. As planned, the HSR is a 700-mile-long rail system capable of speeds in excess of 200 miles per hour on dedicated, fully-grade separated tracks with state-of-the-art safety, signaling and automated rail control systems. The system would serve the major metropolitan centers of California in 2030 and is projected to displace between 86 and 117 million riders from other travel modes in 2030. For Phase 1 of the HSR, between San Francisco and Anaheim, 2020 is projected to be the first year of service, with 40 percent of the projected 2030 ridership levels.

Appendix C

Citations, References, and Contacts

Compilation of Appendix material from each recommendation forthcoming

APPENDIX D
WALKABILITY ISSUES AND RECOMMENDATIONS

Observations: The following are the observations and recommendations of a Transit and Transportation Working Group member for walkability and biking issues in various Mountain View locations. Note: The recommendations presented here have not been fully reviewed nor endorsed by the full Working Group.

Working Group: Mountain View Transit and Transportation

Sections in this appendix:

- Walkability issues related to the intersection of Villa Street and Bush Street
- Walkability issues related to the intersection of West Evelyn Avenue and Bush Street
- Walkability issues related to the intersection of West Evelyn Avenue and Hope Street (adjacent to the CalTrain station)
- Walkability issues related to the intersection of West Evelyn Avenue and View Street
- Walkability issues related to Castro Street
- Walkability issues related to South Shoreline Boulevard
- Walkability issued related to Showers Drive
- Adding a new bike path to connect the Whisman Park neighborhoods with the shopping resources at Grant Road and El Camino Real
- Adding a new bike path to connect the Whisman Park neighborhoods with the shopping resources at Grant Road and El Camino Real

Currently in Mountain View, adequate bike/pedestrian paths linking the Whisman Road/Whisman Station area to the intersection of Grant Road and El Camino Real do not exist.

The task force recommends that the City add a new path, as described below, which could help to improve this situation.

As shown in the image below, at point A, the route could start at the side of the road (at the Whisman Road/Highway 237 intersection) and carry on westward at the top of the shoulder area behind the adjacent parking lots to the north (access points could be added for the businesses at that location, as only a storm fence blocks the way). When the path encounters Dana Street (located between points A and B), it could be routed under the overpass or, more easily, across Dana via an added crosswalk. From there, the route could continue past Pioneer Street at point C (where an additional access point could be added, as only a storm fence blocks the way). We suggest that, if a crosswalk approach is implemented, all traffic signals at South Whisman and Dana Street be set to red while bicycle/pedestrian traffic has the right of way at the crosswalk. That right of way could be triggered only when someone needs to cross; that is, it would not need to be triggered as part of the normal signal cycling at the intersection. The route could run under Highway 85 (between points B and C) (some space would have to be cleared to accommodate, but it appears to be manageable). Then the route could interchange with the Stevens Creek Trail (which runs approximately north to south to the left of the Highway 85 overpass). From that point, the new route could continue southwest within the cloverleaf and then either an overpass or underpass (noted in blue at point C) would allow the route to continue until it reaches Grant Road and El Camino (at point D).

This is a long term recommendation.

NOTE: This suggestion was raised as part of the Mountain View General Plan Update public meeting process.


A
B
C
D

In the following detailed view (as indicated by the black square in the preceding figure), the blue line indicates roughly the path of Stevens Creek. Note that, to the left of Stevens Creek at the bottom of the cloverleaf, a concrete retaining wall is situated (a second wall, not visible, is situated to the right of Stevens Creek. Both the creek and the walls would need to be considered as the details regarding the added path are worked out.

Views of the "retaining walls"

The following figure shows existing Mountain View trails and paths with the proposed path end points circled in red.

Highway 85 overpass and path route that would need to be "cleared to accommodate."

- Walkability issued raised during the Leadership Mountain View (LMV) Walkability Workshop
- City-wide walkability issues

Walkability issues related to the intersection of Villa Street and Bush Street

The intersection of Villa Street and Bush Street is another location that is especially confounding and potentially hazardous to pedestrians, as you can see in the photo to the right. The task force recommends that the City implement major reconfigurations at this intersection The task force recommends improved marking or signaling at this intersection. Depending on the actions taken, his is a medium to long term recommendation.	**Aerial view of the intersection of Villa Street and Bush Street** 
No viewable traffic signal exists on the opposite end of this crosswalk at Villa Street and Bush Street. The task force recommends that the City improve signaling at this point. This is a medium term recommendation.	**View across Villa Street from point A up Bush Street toward West Evelyn Avenue** 

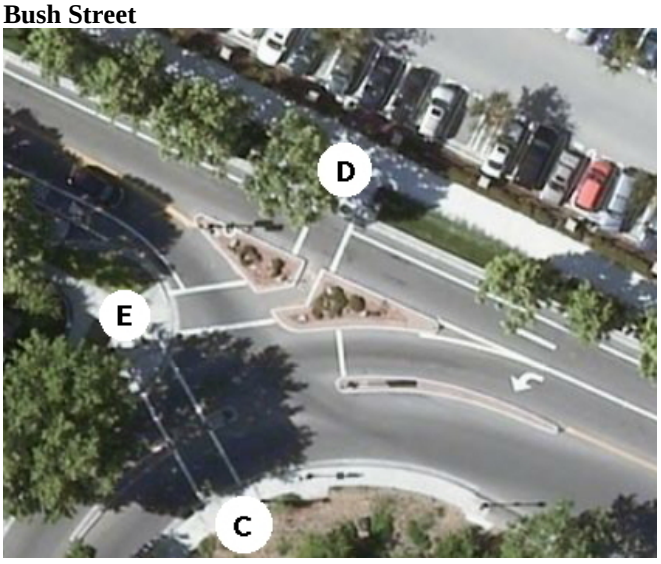
Intersection of Villa/Bush: Crossing Villa from Bush heading northeast; there's a pedestrian crossing but no traffic light for pedestrian control and reference, as noted in the detail pull out..	**View across Villa Street from point A toward West Evelyn Avenue**  

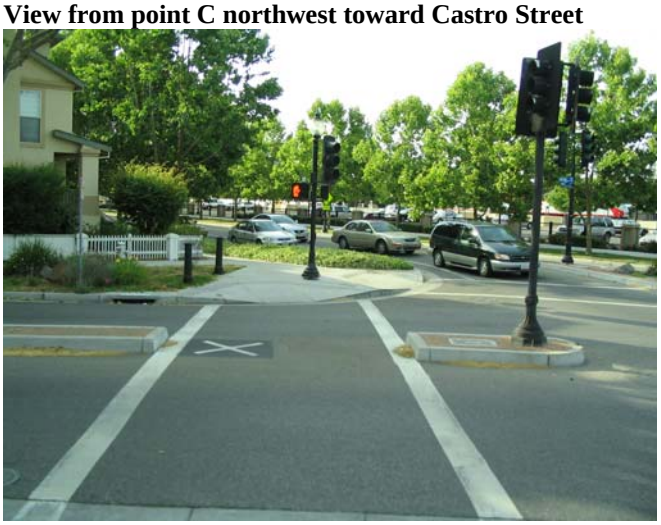
No crosswalk exists for walking across Villa from Bush.	**View across Villa Street from point A toward West Evelyn Avenue** 

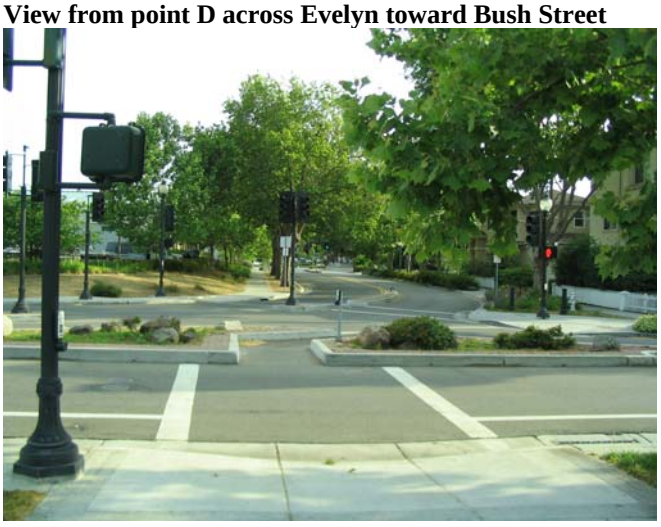
Crossing Bush at Villa going roughly southeast, there's no traffic light to let pedestrians know when their light's turned red. On both sides of the intersection: Same thing applies going in the opposite direction. The task force recommends that the City improve signaling at this point. This is a short term recommendation.	**View from point A southeast down Villa Street toward Calderon Avenue**  

Crossing Bush at Villa going roughly southeast, there's no traffic light to let pedestrians know when their light's turned red. On both sides of the intersection: Same thing on the south side of the intersection. The task force recommends that the City improve signaling at this point. This is a short term recommendation.	**View from point B southeast down Villa Street toward Calderon Avenue** 

<u>Walkability issues related to the intersection of West Evelyn Avenue and Bush Street</u>

The intersection of West Evelyn Avenue and Bush Street is especially confounding and potentially hazardous to pedestrians, as you can see in the photo to the right. There are to many lights pointed in too many directions. The task force recommends major reconfigurations at this intersection The task force recommends that the City improve marking or signaling at this intersection. Depending on the actions taken, his is a medium to long term recommendation.	**Aerial view of the intersection of West Evelyn Avenue and Bush Street** 

Crosswalk crossing Bush at West Evelyn in direction of Castro Street: Can't see the traffic light without moving way to the side because the light is angled away from the crosswalk toward the right. There's a crosswalk going northwest to southeast is going at a wide angle; it's very difficult to see right-turning cars going east on West Evelyn at that intersection. The task force recommends that the City improve crosswalk marking or signaling at this point. This is a medium term recommendation.	**View from point C northwest toward Castro Street** 

No crosswalk at the very strange angle going in a north-southeast direction at Bush and West Evelyn; no crosswalk, no signal. Crossing northwest to southeast at the pedestrian crossing there's no traffic light, except in the middle island on the far side, so pedestrians don't know when the light's turned red. The task force recommends that the City implement a number of features at this intersection to improve pedestrian and bicycling safety and friendliness. This is a medium to long term recommendation.	**View from point C northwest across West Evelyn Avenue toward the CalTrain station**  **View from point E north across West Evelyn Avenue toward the CalTrain station** 
At Villa and Bush Streets, for the pedestrian crossing going roughly north; the button is on one pole, probably not the correct pole, it's on the left side of the crosswalk instead of the right where pedestrians would expect to see it. The task force recommends that the City reconfigure such crossing button locations. This is a medium term recommendation.	**View from point D across Evelyn toward Bush Street** 

Walkability issues related to the intersection of West Evelyn Avenue and Hope Street (adjacent to the CalTrain station)

Issues related to the intersection of West Evelyn Avenue and Hope Street at the CalTrain station

- No crosswalk exists at the west entrance to the train station crossing south even though there is a signal there for traffic to leave the station.
- No traffic light exists for those traveling west on West Evelyn past the west entrance to the train station so pedestrians can see the lights changing; same thing going east on West Evelyn at the same intersection.
- The crosswalk from the train station crossing West Evelyn is set way to the east, so that it isn't easily accessible to people leaving from and arriving at the train station.

The task force recommends that the City implement various crosswalk and signal reconfigurations at this location including improving crosswalk visibility. Additionally, improving signal timing for pedestrians crossing West Evelyn Avenue during Sunday Farmers Market hours is recommended.

Also, improved signal timing in the crosswalk on West Evelyn southwest of the CalTrain Station is very poor for pedestrians and bicyclists, and jaywalking southwest of the intersection is common. Accordingly, the task force recommends adding a well marked crosswalk as noted by blue lines in the photo.

This is a medium to long term recommendation.

The intersection of West Evelyn Avenue and Hope Street. Note the lack of adequate and properly positioned crosswalks.	 

Walkability issues related to the intersection of West Evelyn Avenue and View Street

At the intersection of West Evelyn Avenue and View Street, the crosswalks are not signaled in any direction. As this is both a primary entry point to the train station and to the Sunday Farmers Market, traffic signals that are, at the very least, active during peak commute times and during the Farmers Market are highly recommended.

The task force recommends that the City add signals at this location with queue timing adjustments included as noted here.

This is a medium term recommendation.

Walkability issues related to Castro Street

The crosswalk at Castro Street by Starbucks is not signaled.

The task force recommends that the City improve marking or signaling at this point.

This is a short term recommendation.

The crosswalks at Castro Street by Amici's Pizzeria are not signaled. The task force recommends that the City improve marking or signaling at this point. This is a short term recommendation.	 
The parking pattern for cars at this point on the southeast side of Castro Street between Church Street and El Camino Real is hazardous for bicyclists as it's difficult for drivers to see them as they are backing out and difficult for bicyclists to anticipate what drivers might do. With this configuration bicyclists might move to the sidewalk, thus posing a hazard to pedestrians. The task force recommends that the City reconfigure these parking spaces for parallel parking only. This is a short term recommendation.	

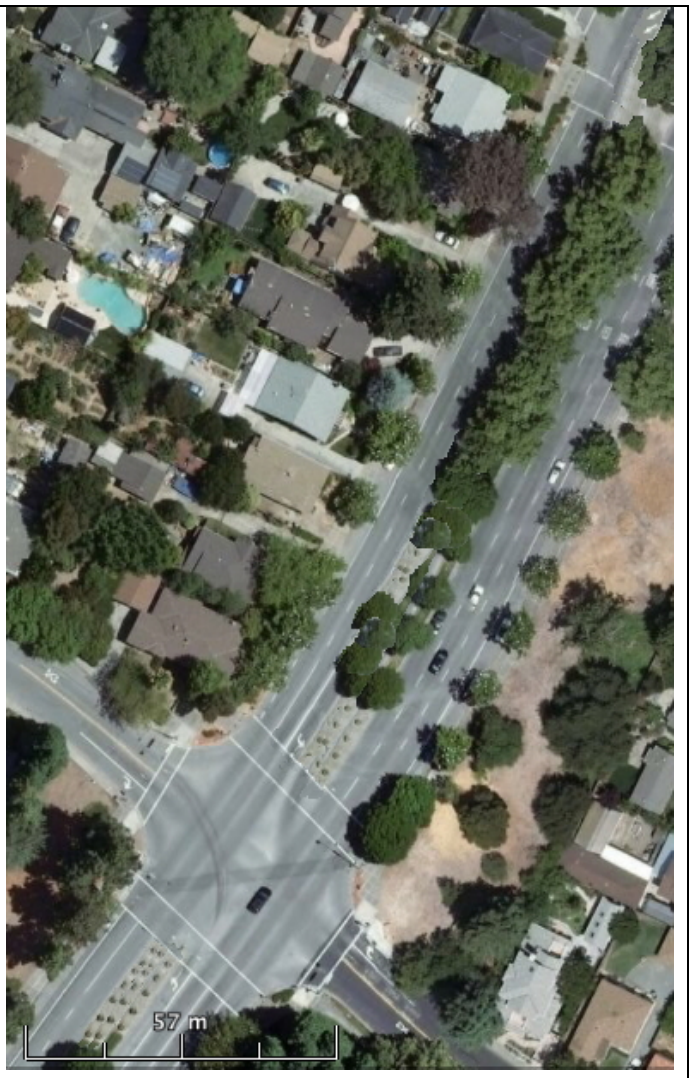
The parking pattern for cars at this point on the northwest side of Castro Street between Church Street and El Camino Real is hazardous for bicyclists as it's difficult for drivers to see them as they are backing out and difficult for bicyclists to anticipate what drivers might do. With this configuration bicyclists might move to the sidewalk, thus posing a hazard to pedestrians The task force recommends that the City reconfigure these parking spaces for parallel parking only. This is a short term recommendation.	

Walkability issues related to South Shoreline Boulevard

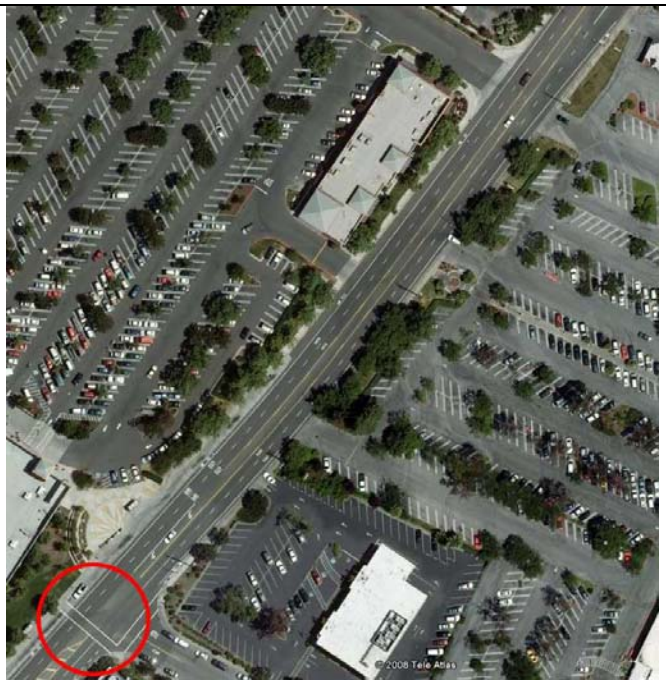
Along Shoreline Boulevard at Snow Street one crosswalk exists at the southwest end of Eagle Park , but it is not signaled. And not crosswalk exists leading to one of the Shoreline entrances to the park as noted in the photo.

The task force recommends that the City add one more crosswalk with signals, improve crosswalk visibility, and consider various traffic calming features on Shoreline Boulevard between California Street and El Camino Real.

This is a medium to long term recommendation.

In addition to the crosswalk issue at Shoreline Boulevard and Snow Street, cars seem to speed up as they approach El Camino beyond California Street, which is at odds with the fact that, on one side of Shoreline are the library, two parks, the Performing Arts Center, City Hall, and the "slow flow" section of Castro Street, and, on the other side of Shoreline, a large expanse of residential neighborhoods. The task force recommends that the City narrow the three southbound lanes of Shoreline above Mercy (where an unsignaled crosswalk exists). The left turn lane going east on Church would shift in a lane, and the medians along that stretch would all be expanded. In the attached file, note the lane closure arrows at the top right, the shifted turn lane about two thirds of the way down, and the expanded medians. This would be a long term recommendation.	

Walkability issued related to Showers Drive

Showers Drive is currently not very pedestrian friendly. In spite of running between two major shopping destinations (San Antonio Shopping Center and Target) only one crosswalk is in place, and it is at a far southwest point on the road relative to the stores, and the crosswalk lacks signals. The task force recommends that the City add crosswalks with signals, improve crosswalk visibility, and consider various traffic calming features on Showers Drive between California Street and Latham Street. This is a long term recommendation.	

Adding a new bike path to connect the Whisman Park neighborhoods with the shopping resources at Grant Road and El Camino Real

Currently in Mountain View, adequate bike/pedestrian paths linking the Whisman Road/Whisman Station area to the intersection of Grant Road and El Camino Real do not exist.

The task force recommends that the City add a new path, as described below, which could help to improve this situation.

As shown in the image below, at point A, the route could start at the side of the road (at the Whisman Road/Highway 237 intersection) and carry on westward at the top of the shoulder area behind the adjacent parking lots to the north (access points could be added for the businesses at that location, as only a storm fence blocks the way). When the path encounters Dana Street (located between points A and B), it could be routed under the overpass or, more easily, across Dana via an added crosswalk. From there, the route could continue past Pioneer Street at point C (where an additional access point could be added, as only a storm fence blocks the way). We suggest that, if a crosswalk approach is implemented, all traffic signals at South Whisman and Dana Street be set to red while bicycle/pedestrian traffic has the right of way at the crosswalk. That right of way could be triggered only when someone needs to cross; that is, it would not need to be triggered as part of the normal signal cycling at the intersection. The route could run under Highway 85 (between points B and C) (some space would have to be cleared to accommodate, but it appears to be manageable). Then the route could interchange with the Stevens Creek Trail (which runs approximately north to south to the left of the Highway 85 overpass). From that point, the new route could continue southwest within the cloverleaf and then either an overpass or underpass (noted in blue at point C) would allow the route to continue until it reaches Grant Road and El Camino (at point D).

This is a long term recommendation.

NOTE: This suggestion was raised as part of the Mountain View General Plan Update public meeting process.


A
B
C
D

In the following detailed view (as indicated by the black square in the preceding figure), the blue line indicates roughly the path of Stevens Creek. Note that, to the left of Stevens Creek at the bottom of the cloverleaf, a concrete retaining wall is situated (a second wall, not visible, is situated to the right of Stevens Creek. Both the creek and the walls would need to be considered as the details regarding the added path are worked out.

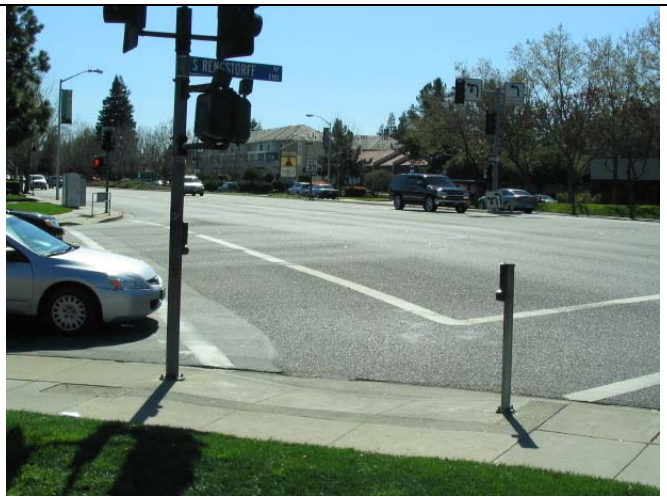
Views of the "retaining walls"

The following figure shows existing Mountain View trails and paths with the proposed path end points circled in red.

Highway 85 overpass and path route that would need to be "cleared to accommodate."

Walkability issued raised during the Leadership Mountain View (LMV) Walkability Workshop

At the Senior Center on Escuela Avenue, a number of hazards exist for bicyclists and pedestrians, who might be traveling to and from the Senior Center, the Day Care Center, or Rengstorff Park. The primary hazards are due to multiple destinations served by one driveway and mixing traffic types on one relatively narrow passage. The task force recommends that the City or property owners redesign this passageway as needed to improve its safety features. This is a medium term recommendation.	
At least one gate remains unlocked and open, which encourages apartment tenants next door to use the Senior Center parking lot for extended tenant parking. The task force recommends that the City compel associated property owners or landlords to secure gates such as these (while allowing that the gates might be left open to allow access by apartment tenants to the Senior Center, in which case, it's the parking infractions themselves that must be addressed). This is a short term recommendation.	 

View of the Senior Center driveway looking toward Rengstorff Park.	
One type of hazard, especially for disabled individuals and those with infant strollers, are posts that are placed too far into the sidewalk. This is especially prevalent around Rengstorff Park, as noted during the LMV Walkability Workshop. The task force recommends that the City relocate or remove sidewalk barriers as needed throughout the city. This is a medium term recommendation.	
Also prevalent around Rengstorff Park are single sidewalk ramps serving two crosswalks. To best serve, in particular, disabled individuals and those with infant strollers, the task force recommends that the City replace the single ramp with one for each crosswalk as needed throughout the city. This is a medium term recommendation.	

One detail that was noted during the Walkability Workshop was a least one crosswalk that remained partially unpainted after road paving work was completed (California Street and Rengstorff Avenue). This crosswalk remains in the same condition as of May 2008. The task force recommends that the City restripe this crosswalk and any others like it in Mountain View as soon as possible. This is a short term recommendation.	
At the intersection of Escuela Avenue and Gamel Way at the entrance of Castro Elementary School, which experiences a fair amount of mixed traffic at the beginning and end of the school day, the crosswalk is marked to the sidewalk, although the edge of the road is used marked as a bike lane. This could pose a hazard both to pedestrians and bicyclists. The task force recommends that the City reconfigure this crosswalk and any others like it in Mountain View as soon as possible. This is a medium term recommendation.	

City-wide walkability issues

Laws related to cars blocking sidewalks need to be created or actively enforced. Such obstacles are a nuisance to pedestrians generally, but are clearly problematic for visually impaired individuals and those with infant strollers.

The task force recommends that the City take the appropriate steps to correct this problem as soon as possible.

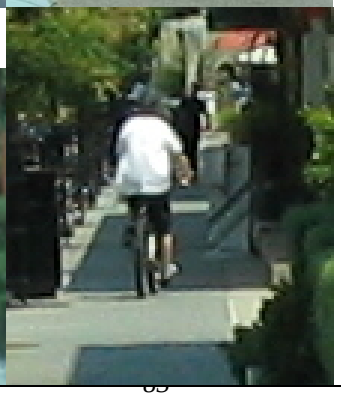
This is a short term recommendation.

Laws related to landscaping that prevents drivers exiting parking lots and driveways from seeing sidewalk traffic before blocking the sidewalk need to be created or actively enforced. The task force recommends that the City take the appropriate steps to correct this problem as soon as possible. This is a short term recommendation.	
Locating bus stops and other sidewalk furniture such that drivers entering from an adjacent side street cannot adequately see oncoming traffic without blocking the crosswalk should be avoided. Where such obstacles are identified, the City should compel the responsible agency to correct the problem. The task force recommends that the City take the appropriate steps to correct this problem as soon as possible. This is a short term recommendation.	

To best encourage walkability in Mountain View, the City should ensure that sidewalks are safe or perceived as safe for pedestrians. Unfortunately, it is very common for bicyclists, skateboarders, etc. to use the sidewalks as well thus posing a potential hazard (if not a less pleasant experience) for pedestrians they encounter. the task force recommends that the City enforce existing laws (such as SEC. 19.51 in the City code), that such laws be enhanced as needed, and that the City explore the reasons why bicyclists and the like feel compelled to ride on the sidewalks.

The task force recommends that the City take the appropriate steps to correct this problem as soon as possible.

This is a short term recommendation.



To help make crosswalks more safe and perceived as being more safe, the task force recommends implementing raised crosswalks, speed tables, and visual features, such as brickwork, for as many crosswalks as possible.[42]Further, we recommend that chicanes, bulbouts, and the like are favored over speed bumps, which encourage drivers to speed up between bumps and slow to a crawl prior to the bumps.[43] As this would be an ongoing efforts, no timeframe is applicable.

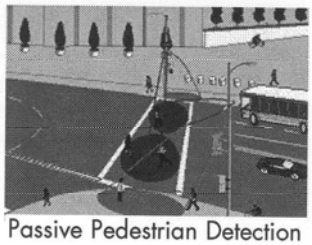
Raised crosswalk in Tallahassee, FL (www.trafficcalming.org)

Crosswalk with brickwork at Tyrella Avenue and Walker Drive in Mountain View

[42] TrafficCalming.org: Raised Crosswalks ...(raised crossings, sidewalk extensions) (http://www.trafficcalming.org/raisedcrosswalks.html)

[43] Pedestrian Technical Guidelines: A Guide to Planning and Design for Local Agencies in Santa Clara County, Valley Transportation Authority (VTA), 2003, pg. 2.25

To help make walking in Mountain View more user-friendly, the task force recommends that the City implement passive pedestrian detection in as many signaled crossing points as possible. According to the Valley Transportation Authority (VTA): "Passive pedestrian detection devices monitor the presence of pedestrians to permit an extension of the crossing time interval. Pedestrians entering the curbside detection zone will activate the pedestrian call feature."[44] As this would be an ongoing efforts, no timeframe is applicable.


Passive Pedestrian Detection

To provide a safer and more pleasant walking experience around town, the task force recommends that the City implement "pedestrian scrambles" (the concept is also known as "Barnes Dance" and "exclusive pedestrian phase") in appropriate locations within Mountain View.

In the State of California, Oakland, San Francisco, and Beverly Hills have all recently and successfully implemented scrambles in their cities (see Resources at the end of this document). In Oakland, which leveraged from earlier San Francisco and Beverly Hills experiences), they have found that their test installation, at 8th Street and Webster Street, resulted in:

- No complaints registered
- Fewer traffic accidents than previously
- Low cost, as no signal changes were necessary (with the exception of a 22-second scramble allowance adjustment)

The task force recommends two types of scrambles for city consideration:

- At major thoroughfares, such as Shoreline Blvd. at Latham and Church Streets, where vehicle and pedestrian/bicyclist conflicts are common.
- At four-lane, four-way stop intersections, such as Hope and Mercy Streets, where only crosswalk paint modifications would be required, and less vehicular wait times would be experienced.

[44] Pedestrian Technical Guidelines: A Guide to Planning and Design for Local Agencies in Santa Clara County, Valley Transportation Authority (VTA), 2003, pg. 3.08

As this would be an ongoing efforts, no timeframe is applicable.

Obstacles:

- The scramble improvements described in this document require cash outlay and/or budgeting, and the city must, necessarily weight the relative merits of one fiscal need over another with regards to city expenses.
- Some time and public education will be necessary for drivers and others to adjust their behaviors to accommodate and fully make use of scramble implementations.

Resources:

- Jason Patton, City of Oakland Transportation Department: Manager for Pedestrian Program master planning (with regard to 8th and Webster scramble implementation), 510-238-7049
- Bijan Vaziri, Traffic Engineer, City of Beverly Hills, Engineering and Transportation Department (with regard to scramble implementations in the City of Beverly Hills), 310-285-2556
- San Francisco Metropolitan Transportation Agency (MTA) Livable Streets Program (with regard to scramble implementations in the San Francisco along Montgomery Street, and at Leavenworth and McAllister)
  http://www.livablestreets.org
  or
  Cristina Olea, Pedestrian Program Manager
  SFMTA Transportation Planning and Development Division
  1 So. Van Ness Avenue, 7th Floor
  San Francisco, CA 94103
  livable.streets@sfgov.org

References:

- Oakland Scramble Evaluation, University of California at Berkeley Traffic Safety Center (see Research: Pedestrian Safety: Oakland Scramble Evaluation)
  http://www.tsc.berkeley.edu/research/scramble.html
- Pedestrian Facilities Users Guide: Providing Safety and Mobility, USDOT Federal

Highway Administration Research and Development, Publication number FHWA-RD-01-102, March 2002. Online copy available at: http://purl.access.gpo.gov/GPO/LPS28597 • A Step in the Right Direction: Experiences with a Scramble in Oakland's Chinatown, University of California at Berkeley Traffic Safety Center online newsletter, Volume 3, Number 1, Winter 2005-06 http://repositories.cdlib.org/cgi/viewcontent.cgi?article=1004&context=its/tsc • Traffic Engineering, Roess, Prassas, & McShane, 3rd Edition (2004), ISBN 0-13-142471-8	

Appendix E
CO2 Emission Reduction Calculations

Calculations for Metric Tons Savings by Community Shuttle Implementation

75,000		Based on Menlo Park annual shuttle ridership
51,750		Assumed ridership that currently bicycle, walk, dropped off, or did not make trip
16,500	Drive alone	Based on 2008 Menlo Park survey of passengers: 22% would drive alone if shuttle not available.
	247,500	Annual vehicle miles traveled of 75% commuter drive alone trips at 20 miles one-way trip
	20,625	Annual vehicle miles traveled of 25% local drive alone trips at 5 miles one-way trip
	Carpool	Based on 2008 Menlo Park survey of passenger: 9% would carpool if shuttle not available
	11,138	Assumes 50% of 9% of carpoolers drive; 75% commute 20 miles one way
	928	
	280,191	Annual total vehicle miles traveled reduced by implementation of clean fuel shuttle program
24.6		Average miles per gallon (estimates vary)
	11,390	annual gallons of gasoline saved by shuttle program implementation
19.4	C02 pound per gallon of gasoline	
	220,963.34	Annual Pounds of C02 saved by community shuttle program
	100.23	Annual metric tons of C02 reduced by community shuttle program